

MANUFACTURERS' RECORD.

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

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BALTIMORE, JANUARY 15, 1897.

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Manufacturers' Record.

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BALTIMORE, JANUARY 15, 1897.

Do you desire to reach 10,000 of the foremost business men of New England and the Middle States, including all cotton-mill owners? If so, have you studied the plan of the Special Seaboard Air Line Supplement, as given on page 25? This, moreover, it should be remembered, is in addition to the regular circulation of the Manufacturers' Record, as the Seaboard Air Line has agreed to place 10,000 extra copies in the best hands in the Middle and New England States. This affords an opportunity of the entire country reached by the Seaboard to make a united effort to attract public attention.

The Atlanta Constitution announces that it is to issue an evening edition regularly hereafter, beginning January 18. The Manufacturers' Record trusts that the evening issue will enjoy as vigorous and rapid growth as its morning edition, which has been such a power for the advancement of the South, as well as Atlanta and Georgia.

Mr. J. Edward Simmons, president of the New York Clearing-House Association and president of the Fourth National Bank, in an interview on the business situation, said:

There are only indications as yet of the prosperity that is in store for us as a people. Only the unthinking believed or expected that a great business revival would be felt the morning after election. We know, or should know, that periods of great financial depression do not find their relief in a day. Profits have to be earned. There may be, and probably will be, dull months during the remainder of the winter, but long before the spring has passed the improvement in all kinds of business will be felt, and felt for a long time. Cool-headed business men can reach no other conclusion than that good times are ahead of us. One reason for such a conclusion is found in last year's trade balances. In 1879, one of the most prosperous years in our history, we congratulated ourselves that there was over \$300,000,000 to our credit in the international trade balances. This year our credit will be millions more than that. Our exports during the past year have been heavy and our imports light. For the first time the United States heads the list of the creditor nations of the world. This means national prosperity.

The Increase of Exports from Southern Ports.

The Manufacturers' Record is able today to give the full exports of corn and wheat from all United States ports for the calendar year 1896. The showing is a wonderful one for the South. The exports of corn by ports were as follows:

	1895.	1896.
	Bushels.	Bushels.
Baltimore	9,645,758	26,382,182
Boston and Charles'n.	5,320,083	5,893,209
Newport News	4,866,335	10,376,625
New York	19,626,817	19,100,190
Norfolk and Portsm'h.	3,545,363	12,891,285
Philadelphia	3,307,413	8,829,376
Galveston	1,232,877	6,222,280
New Orleans	8,756,766	25,292,502
Puget Sound	3,872	14,752
San Francisco	75,027	50,168
Superior	724	9,425
Other customs dist's.	5,088,634	13,456,443
Total	61,469,669	128,518,437

These figures show gains at Southern ports as follows:

	Corn.	Bushels.
Baltimore		16,700,000
Newport News		5,500,000
Norfolk		9,300,000
Galveston		5,000,000
New Orleans		16,500,000
*Other customs districts		8,400,000
Total		61,400,000

*Mainly but not wholly Southern, the bureau of statistics not giving the details of exports from Pensacola, Mobile, Beaufort, etc., but classing all of these under "Other customs districts."

The total gain for the entire country was 67,100,000 bushels, and of this the South's share was about 61,000,000 bushels. In 1895 the South exported 32,000,000 bushels of corn, and all other ports 27,600,000 bushels, while in 1896 the South exported 94,000,000 bushels and the remainder of the country only 33,700,000 bushels.

The exports of wheat were as follows:

	1895.	1896.
	Bushels.	Bushels.
Baltimore	3,067,261	6,589,856
Boston and Charles'n.	4,810,384	9,838,955
Newport News	1,185,400
New York	20,339,263	18,476,263
Norfolk and Portsm'h.	165,765	17,327
Philadelphia	1,537,226	4,863,886
Galveston	3,438,060
New Orleans	836,202	3,853,337
Puget Sound	3,172,524	3,535,203
San Francisco	18,512,605	20,210,723
Willamette	8,237,943	6,776,432
Duluth	496,504	2,183,118
Superior	2,312,086	1,645,834
Other customs districts	798,037	1,318,288
Total	66,371,200	82,748,191

The total gain in wheat exports was 16,400,000 bushels. The gain at Southern ports was 2,600,000 at Baltimore, 3,438,000 bushels at Galveston, 3,000,000 bushels at New Orleans and a considerable gain at some other Southern ports.

Of oats, the gain at the South was Baltimore 6,800,000 bushels and Newport News 1,900,000 bushels. In flour exports Baltimore gained 500,000 barrels, Newport News 400,000 barrels and New Orleans nearly 200,000 barrels. The aggregate increase of all breadstuffs exported from Southern

ports for the year was over 80,000,000 bushels of grain.

The total value of all breadstuff exports for the year was as follows:

	1895.	1896.
Baltimore	\$15,919,480	\$26,787,403
Boston & Charles'n.	11,601,222	16,218,510
Newport News	7,169,113	9,611,460
New York	40,936,111	47,914,255
Norfolk & Portsm'h	1,757,182	4,757,511
Philadelphia	5,325,054	8,421,800
Galveston	578,447	4,299,781
New Orleans	4,483,512	11,729,752
Puget Sound	2,626,748	4,126,064
San Francisco	14,597,138	22,114,443
Willamette	5,375,580	6,626,211
Duluth	2,179,878	2,770,518
Superior	4,540,276	3,962,602
Other customs dist's	4,481,811	6,687,186
Total	\$121,571,552	\$176,027,595

The gain at leading Southern ports (Mobile, Pensacola and Beaufort not being given in the government's detailed report) was as follows:

Baltimore	\$10,800,000
Newport News	2,500,000
Norfolk and Portsmouth	3,000,000
Galveston	3,700,000
New Orleans	7,300,000

Total \$27,300,000

The gain from the entire country was \$54,500,000, the South having a little more than one-half of the total increase from the United States. Comment on these figures seems almost unnecessary.

The Louisville Commercial continues its aggressive work in behalf of the industrial interests of that city. It seems to take the lead in the South just now in the attention that it daily gives to this matter. If the people of Louisville, whose awakened energy in this direction was recently pointed out in the Manufacturers' Record, will continue their vigorous efforts, they will soon learn the value of united public sentiment in quickening the whole business life of any community. May Louisville's example be followed by every other Southern city and town.

Any of our free-silver friends who are disposed to attribute recent bank failures and all other business troubles to the recent election should read what an ardent but honest silver paper of the West—the St. Louis Republic—says as touching this question:

Those who lay great stress on the recent bank failures in the Northwest as indications of increasing business depression make as great a mistake as was made by those who looked for an instant and strong business revival after the election.

The trouble in several of the Northwestern wrecks was the failure of the Illinois National, which was primarily due to recklessness and carelessness. One of the banks which went into voluntary liquidation—the Atlas National—was brought by mismanagement to the condition that forced such action.

The most reasonable view of these failures is that the dull season caught the banks unprepared to weather it and they suffered the consequences. Business in general is no worse than was to be expected from existing and precedent conditions, but there is promise of a decided change for the better in the spring. The fervid promises of politicians in October were as bad as the pessimism of croakers now, but no worse. Stick to business and hustle. There is trade ahead for the workers.

Prospects Brighter.

With both pipe works in operation, with Woodstock furnace No. 3 to go in blast at an early date and the prospects bright for the United States Car Works to put a full force of hands to work soon, makes the outlook for Anniston brighter than it has been for some time.—Jacksonville (Ala.) Republican.

When the facts are studied it will be found that everywhere, North and South, there are just such signs as these, pointing the way to greater prosperity. Long-idle plants are getting ready to start; some are already at work; orders are increasing—slowly it may be, but nevertheless surely; capital is once more beginning to look around for investment. We are on the up grade. It may be some little time before we are in the full swing of prosperity, but that good time is daily drawing nearer.

The Country's Shipbuilding.

American ship-yards have today, according to the Cleveland Marine Review, \$16,269,342 worth of naval work. Add the two Japanese battleships, and the total is over \$20,000,000. One-third of this total, or \$7,065,000, is at Newport News, which twenty years ago could have built nothing, and where even ten years ago the building of a battleship would have seemed impossible. At present rates of raw material, with superior American organization, it will not be long, relatively speaking, before the world's shipbuilding gravitates to the shores of the United States.—Philadelphia Press.

The Newport News Shipbuilding & Dry Dock Co. informed the Manufacturers' Record a few weeks ago that it had an aggregate of \$9,000,000 of work on hand. This one Southern ship-yard, therefore, has over one-half of the shipbuilding of the country now on hand, and even if the two Japanese contracts be included, it still has nearly one-half. This is one illustration of the South's progress; dozens equally as significant could be given, and yet there are people who refuse to realize the reality and magnitude of the development of the South.

Expanding Trade and Commerce.

The special dispatch from Pensacola, published on the cover of this issue, that a ship is now loading 3000 tons of Alabama pig iron at that port for Japan, is a very striking illustration of the steady and rapid expansion of the industrial and commercial interests of the South. It is, moreover, an illustration of the expansion now going on in the world's commerce. Three years ago a prediction that Japan would by this time be fast taking rank as one of the world's great powers, building a strong navy and developing its railroad and industrial interests, would have been as visionary as a prediction that the South would be exporting iron to Japan, to Calcutta and to England itself, and practically setting the price for the iron trade of the world.

It is only by pausing once in a while to look back over what has been accomplished that we can understand how rapidly we are moving. We are entering upon an era of advance-

ment and expansion that will change many established trade customs, break down many barriers that have separated nations and sections, and open new avenues for the employment of skill, energy and capital. The South is fortunate in being able to enter this period with its industrial and financial interests tested by the strain of the last six years and strengthened by the experience thus gained. In this new era of activity, of expanding commerce and of prosperity the South will take a leading part.

Testimony of Two Kinds.

Five hundred leading manufacturers and railroad men, interviewed by the Manufacturers' Record, of Baltimore, express the almost unanimous opinion that the signs are bright for a return of business prosperity in this country. The only doubt is predicated upon the fear that Congress might not meet the conditions with desirable legislation.

This is the almost universal view among the non-partisan business men of the country. But there are politicians who fatten on strife—who hope to profit on the losses of the people—that are deeply interested in defeating and destroying the hope of a return of better times. They shall with joy any losses in business, or any suffering which may befall any of the people.

They have been telling us that the gold standard robs the poor and fattens the bankers. And yet when a bank falls they point to it as an awful example of the deadly effect of the gold standard. Their calamity wallings are adjustable and fit all occasions, coming and going.

The people are growing weary of them, and sooner or later they will be left stranded on the rocks, if they have not already met that fate.—Macon (Ga.) Telegraph.

Which will you choose—the one that believes in advancement and improvement, believes that there are signs of progress indicating the first light of a breaking day of prosperity; the other that refuses to see aught but increasing darkness and gloom in the business world? The Manufacturers' Record believes that the day is breaking, and that slowly but surely the sun of prosperity will arise.

[The Business Record, Houston, Texas.]

The Potency of a Single Mind.

Mind, or that spiritual force we call mind, is ever at work over matter. A scientist denominates it the creator.

However that may be, we of the human family are conscious of its presence in a greater or less degree in every act of life, be it either to build or to destroy, and the happiest of mankind is he whose faculties enable him to do something to improve the conditions of life, rather than to assist in any retrogressive measure.

Few, as individuals, accomplish much even in the sphere of a lifetime for the

common good, and the organized forces, constituted in the nation's general assembly, representative of the South, have done less in three decades for the material well-being of the South than one whose services for his country are portrayed elsewhere in this number of The Business Record.

The work of Richard H. Edmonds, collectively, within fifteen years last past is a masterpiece.

No medium of combined forces has done more for the South, nor is there altogether a spirit more potent for development of our resources than is vested in the editor and proprietor of the Manufacturers' Record.

The tribute which Messrs. Latham, Alexander & Co.* pays this distinguished

*Referring to the cotton book issued by Latham, Alexander & Co. for 1890, in which was published a history of the Manufacturers' Record. American is, though eloquently expressed and delicately conveyed, but a slight token of the estimation which should characterize the acknowledgment due from the South to one who has so eminently well served her during the trying days of her rehabilitation.

Two Illustrations of the Manufacturers' Record's Circulation.

United States Consulate,
Riga, Russia, December 26.

Editor Manufacturers' Record:

Sir—Having noticed in your paper an interesting article about "Revolution in Deepening Shallow Rivers and Cutting Canals," I should be much obliged to you for sending me the copy of the Vol. 29, No. 17, dated May 22, 1896, and beg to enclose twelve cents in postage stamps in payment of same. Thanking you in advance, I remain, sir,

Your obedient servant,
N. BORNHOLDS,
United States Consul.

Charles J. Murphy,
Commissioner for the State of Iowa, U. S. A.; Late Special Representative Abroad of United States Department of Agriculture, Washington, D. C.

Brussels, January 1.
Editor Manufacturers' Record:

Dear Sir—Will you kindly mail me say ten numbers of the Manufacturers' Record of May 22, and put me on your list as a subscriber, and on receipt of your bill will send you the amount through the postoffice.

Yours very truly,
C. J. MURPHY.

A Few Questions.

Philadelphia, Pa., December 30.
Editor Manufacturers' Record:

The address of Mr. Theodore C. Search, on "The Future of American Manufacturers," published in your issue of December 18, will no doubt have many interested readers. I trust you will ask Mr. Search a few questions, based on points in the address:

1. If a "protective" system is necessary to hold our domestic markets, how can we account for the fact that the per capita consumption of imported goods has been increasing—from \$4.39 in 1830 to \$10.48 in 1895? Is the "protection" inadequate?

2. Shipping should be "protected"; certainly, if other industries are "protected." What is the "protection" received by the farmer as a producer?

3. In stating the "productive industries far exceed in importance all other interests"—does this include agriculture? If so, part, at least, has representation in the Cabinet. If agriculture is of less importance than the "protected" indus-

tries, would it not be advisable to publish the facts and figures?

S. PEACOCK,
Editor American Fertilizer.

Information Wanted.

Anniston, Ala., January 6.
Editor Manufacturers' Record:

If you can ascertain, without too much trouble, will you kindly let me know the market price of kaolin, and also send me, if you can, the names of parties who use it. For all of which I will be greatly obliged.

J. C. KEITH.

New York, N. Y., December 31.
Editor Manufacturers' Record:

Will you please give me an idea of what kaolin and corundum are used for, and an analysis of same?

SAMUEL G. MUNN.

[These inquiries are published for the benefit of subscribers who may be interested in kaolin and corundum.—Ed. M. R.]

GREAT ELECTRIC-POWER PLANTS.

A Report of Extensive Undertakings in West Virginia.

[Special Dispatch to Manufacturers' Record.]
Charleston, W. Va., January 13.

Mr. A. M. Volz, a prominent masonry contractor of Staunton, Va., informs me that he has closed contracts to build two great dams on New river, on the line of the Chesapeake & Ohio Railroad—one at New River Falls, seven miles below Hinton and nine miles below the junction of the Greenbrier and New rivers, and the other at the falls of the Big Kanawha, below the junction of New and Gauley rivers, which form the Big Kanawha.

He says that the immense water-power at these two points, where there is always a vast volume of water, have been purchased by Mr. J. Turner Morehead, who, with his associates, will at once proceed not only to construct these great dams, but to put up electric-power plants at each of these places for furnishing power to the large number of mining plants on New and Kanawha rivers, and also for engaging at the points mentioned in the manufacture of coke and the utilization of the by-products of coal in manufacturing the great number of articles that are made from these by-products.

Mr. Volz assures me that he has signed the contracts for constructing the masonry for these dams, and for the power plants to be erected at them. If these parties have the necessary capital to carry out their plans (and I am informed that they have), these are two of the most important enterprises ever started on the line of the Chesapeake & Ohio Railroad—enterprises that will be very far-reaching in their results in the development of the vast coal resources, both of the Lower and of the Middle Measures of the Virginias, on the line of that road.

In reply to a telegram to Mr. A. M. Volz, of Staunton, he wires as follows: "The only information that I can now give is that Major J. Turner Morehead has awarded to Gentry & Volz contracts for masonry and excavation for powerhouse at New River Falls, W. Va."

Mr. J. Turner Morehead is a prominent North Carolinian, and has been largely interested in the development of acetylene gas, having established at Spray, N. C., near Leaksville, a plant for this purpose. Mr. Morehead can probably be reached either at Leaksville or Spray, though the Manufacturers' Record has not yet been able to receive from him by telegraph any additional particulars as to these two great undertakings reported from West Virginia.

Export Trade at Pensacola.

[Special Dispatch to Manufacturers' Record.]

Pensacola, Fla., January 12.

Export business through Pensacola continues to increase. Following are transactions for week ending January 7: One hundred thousand bushels wheat, 10,000 bales cotton, 60,000 bushels corn, 1000 tons pig iron and 500 tons miscellaneous freight. Coal shipments average to date over 1000 tons per day. Louisville & Nashville Railroad has just bought 100 acres near city limits for sidetrack purposes for handling this business. At end of fiscal year Pensacola will astonish her most ardent admirers by her wonderful increase in export and import business. Work has commenced on new street railway. R. E. L. DANIEL.

Industrial News from Birmingham.

[Special Cor. Manufacturers' Record.]

Birmingham, Ala., January 12.

The past week developed nothing but dullness in the domestic trade, both in the way of inquiry and orders for iron. By contrast the export inquiry was brisk, and every day since the new year opened has seen orders registered for export. One would not be far out of the way who guessed the volume at an average of 1000 tons daily. A leading official of one of the companies stated in a conversation upon this trade that the only trouble his company encountered in the export trade was the uncertainty of securing tonnage, and they did not feel justified in making a firm offer until they had a safe option on tonnage. But heretofore it has happened that where there was freight to load there would congregate the carriers, willing victims to "prevailing rates." Offering freight is like the apothecary's ointment that attracts the flies and captures all it has space to hold. So far, though full 30,000 tons for export account is registered for forward delivery, every single ton of it has been covered by secured ocean tonnage. There is no business in which some risk does not enter, and cool calculation, aided by sound discretion, makes it merely nominal. Quotations are officially unchanged, and, as stated last week, are not iron-clad, but the extent of concessions is jealously guarded. To show the wide distribution that the export trade is assuming, the records show, in the immediate past, inquiries and orders from Austria, Italy, Belgium, Mexico, Japan, India and the United Kingdom, and every point to which a sale was made has renewed inquiry and orders. The development of this trade to its present importance and growing volume is a matter of congratulation to those who grasped the situation and inaugurated a new era in the iron trade no less surprising than gratifying. The Birmingham Rolling Mills resumes work with its plate, bar and guide mills running, but there is nothing in the situation yet that gives promise of continuous operations on its part.

Among the minor industries there is nothing doing that invites special mention. New orders are few and far between. There seems to be a halt in this direction—a waiting on developments. The Nall Machine and Boiler Works, just finished, is fortunate in securing the contract for the rehabilitation of furnace No. 2 of the Sloss Company, lately blown out. The other contracts not previously mentioned are insignificant. The flow of homeseekers from the Northwest continues, and negotiations are being conducted for locating several colonies. On the coal trade nothing can be said "that looks well in print" for the general trade. The season has been against their prosperity, and Pittsburg has planted every section that could be reached by her with

black & mining f... are active but they
Jan. 15, 1897.
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black diamonds. A few companies mining for coke ovens on time contracts are active, but it is not general. There have been a few export orders placed, but they have not been of magnitude sufficient to create any stir.

Notes on the Outlook.

[Special Cor. Manufacturers' Record.]

New York, N. Y., January 11.

There is a very cheerful, confident tone in the talk one hears from those who belong to that aggregation of hard-working individuals commonly called "Wall street," and there is much favorable comment on the Southern outlook, especially since the appearance of the interview with Mr. Eckels, the comptroller of the currency, which was given to the Manufacturers' Record last week and afterwards telegraphed to the daily papers. That the coming year will be one of gratifying activity in all kinds of conservatively-planned enterprises in the South, aided more or less by Eastern capital, is generally admitted.

This activity will, from present indications, be manifested to a larger extent than for four or five years in railroad building; not in long lines, requiring enormous outlay, and therefore the bucking of the big financial houses, but in a number of short lines, for which there is a present need and an assurance of profit from traffic already in sight. In other words, while the time is not quite ripe for enlisting favorable consideration at the hands of the heavy capitalists and financiers, yet it is said that there are more people with a little money to invest looking about than have been discoverable since the panic of 1893.

There is here and there manifested by short-sighted men, of an arrogant turn of mind, a disposition to contribute to the survival of the rapidly-dying-out clamor for free silver, by the same sort of utterances which did so much toward spreading that sentiment throughout the South and West. That is to say, there are some people who insist on pursuing the punishment plan now as a sequel to the threats and intimidation plans pursued prior to the election. Fortunately, the real financial leaders not only disavow any sympathy with this sort of thing, but concur in condemning it.

However that may be, the fact remains that West Virginia (largely, I think, because its resources were so widely advertised during the campaign as a State that ought to be for sound money and protection) is just now a prime favorite, and it would not be surprising if some developments within its limits involving the expenditure of large amounts should in the near future begin to materialize.

Speaking of West Virginia brings to mind the recently-published statement, made by Mr. Decatur Axtell, one of the vice-presidents of the Chesapeake & Ohio Railway, to the effect that that line had had during the last few weeks the largest traffic in its history. This is a pretty big straw, and one emphatically indicating not a mere whiff of the breeze of prosperity, but a good hard wind. It is true that the Chesapeake & Ohio is a most admirably-managed railroad, and one whose passenger traffic has apparently grown month by month during all the recent period of depression, but in spite of its scenic attractions and the fact that it runs through historic ground, and has fine, fleet trains, the biggest business in its history could not have been obtained if the people who traveled and who bought merchandise hadn't had

some money and a fairly well-founded expectation of soon having more.

The Chesapeake & Ohio, through its Western ally, the "Big Four," is capturing a large amount of eastbound business from St. Louis and Chicago by reason of the favorable reception which has been given to the idea of an extra fast train leaving both those cities at high noon instead of only night and morning. During a recent trip eastward from St. Louis I had as a fellow-passenger an Englishman, who entertained me with a discourse upon the superior comfort, from nearly every point of view, obtainable in first-class American trains over those in his own country, and what seemed at the moment to have pleased him more than anything else was that day travel on this gem of a train was possible without having to get up at a beastly hour in the morning.

This fellow-traveler of mine had been down through Northwestern Arkansas, and was regretting that the new fast train from Texas to St. Louis on the Frisco, the only road now built through that grand plateau, famous already as the home of the big red apple, and destined to become more so as the situs of not only the highest possible horticultural and agricultural prosperity, but of substantial industrial development in several branches of human endeavor—this gentleman from beyond the sea was, as I started to say, regretting that he did not see more of "the Ozark uplift" on account of the scenery. When I happened to mention the fact that one of its now inaccessible sections was the only place in the United States, and probably in the world, where large stratified beds of almost pure zinc lie right under the surface of hundreds of square miles, he declared (and he was evidently a very intelligent man, and one on the lookout for openings for investment and for well-directed energy) that he had never heard that there was either zinc or marble in the State of Arkansas!

This display of justifiable ignorance made me wish that I could have brought up, by some "presto change," a certain otherwise well-informed citizen of Arkansas, who had, with a that-settled-it air, informed me a few days previously that the zinc leads of Arkansas were as well known as the coalbeds of Pennsylvania! And thus was added another example of that peculiar provincialism which assumes that all the world must know what happens to be known in its own narrow little horizon.

THOMAS P. GRASTY.

President of the Association.

At the annual meeting of the Merchants and Manufacturers' Association of Baltimore, Mr. Summerfield Baldwin, of the firm of Woodward, Baldwin & Co., was elected president, succeeding Bernard Gilpin. Mr. Baldwin is a prominent merchant of the city, and his firm is interested in a number of Southern manufacturing enterprises.

Mary E. Wilkins is engaged in writing a series of striking sketches of New England neighborhood life for The Ladies' Home Journal. They will portray a small community's social indulgences, sketching the old-fashioned quilting-party, the time-worn singing-school and an apple-paring bee.

If you are thinking of enlarging your mill, factory or mine, or of purchasing machinery of any kind, send us a postal card giving the character of the machinery needed.

RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

An Extensive Electric Line.

Articles of incorporation have been filed with the secretary of state of Ohio for what will be the longest electric railroad system in the world. The project contemplates changing the Cincinnati, Hamilton & Dayton Railway system between Cincinnati and Toledo and also between Dayton and Ironton to an electric line.

Denison & Northern.

The Denison & Northern Railway Co., which is promoting the line from Daugherty, I. T., to Denison, Texas, has elected Newton B. Childs, of Chicago, president; W. J. Scott, of Kansas City, and P. E. Fairbanks, of Denison, vice-presidents, and C. S. Cobb, of Denison, treasurer. It is reported that the company will try to take the line out of the receiver's hands and complete it between the points named.

An Addition to the K. C., P. & G.

A dispatch from Kansas City announces that the Kansas City, Pittsburg & Gulf has secured the line between the Missouri river and Pattonsburg, which has been in the possession of the syndicate headed by Theodore C. Bates, of Worcester, Mass. While the line is controlled by the Kansas City, Pittsburg & Gulf, it will be a part of what is known as the Kansas City & Northern connecting system, a branch of the former.

Canal to Birmingham.

The plan to construct a canal from the Birmingham district to the Warrior river, advocated by Mayor Van Hoose, of Birmingham, Ala., and others, has received encouragement from the government engineer, who has examined the proposed route and recommends an appropriation of \$15,000 for a complete survey. The canal, if built, would form a new route for the coal and iron from Birmingham and the Warrior coalfields to the seaboard at Mobile.

Chesapeake & Ohio's Business.

Vice-President Decatur Axtell, of the Chesapeake & Ohio, is authority for the statement that the Chesapeake & Ohio is having a large traffic. He is quoted as saying: "There has been a gratifying increase in our business, and it is not in one or two places, but all along the line. From everywhere have come reports of far better business, and the outlook is more encouraging. The increased business has not fallen off with the advent of 1897; in fact, I look for an excellent year."

Little Rock & Memphis Extension.

In a letter to the Manufacturers' Record, one of the principal parties promoting the extension of the Little Rock & Memphis to a connection with the Kansas City, Pittsburg & Gulf or some other road, states that neither the Kansas City, Pittsburg & Gulf nor the Green interests are associated as yet in the enterprise, and that Arkansas and Tennessee parties are the prime movers. It is proposed, if possible, to secure convict labor from the State of Arkansas to build the road.

Choctaw, Oklahoma & Gulf.

The annual report of the Choctaw, Oklahoma & Gulf system shows that the net receipts for the year ending October 31, 1896, were \$202,220.69, an increase

of \$75,000 over the preceding year. The surplus from the railroad and mining department was \$228,607. The Choctaw, Oklahoma & Gulf was completed between Wister and Oklahoma City, 216 miles, in 1895, and the report just issued is the first covering the operations of the entire line. Baltimore and Philadelphia capital built much of the line. Francis L. Gowen, of Philadelphia, is president.

Chesapeake & Ohio Traffic.

The earnings of the Chesapeake & Ohio for the year 1896 show a gratifying increase over 1895, although most of the railway lines in the country were unable to hold their own compared with 1895.

Referring to the bright prospects of the Chesapeake & Ohio the Cincinnati Commercial Tribune says:

"The gross earnings of the Chesapeake & Ohio for the year were in excess of \$10,250,000. For the year, save the last week of December, when there was an increase over the corresponding period of 1895, the gross earnings were exactly \$10,005,816, as against \$9,540,093 for the same period of 1895; so the increase for 1896 over 1895—that is, a period of eleven months and three weeks—was just \$495,723; add to this the increase of the last week of the year, \$78,258, and we have \$574,018.

"The Chesapeake & Ohio is rapidly becoming a dividend road. The fixed charges are a little over \$3,000,000 a year. The funded debt June 30, 1894, was less than \$65,000,000; the common stock was about \$60,500,000. The expenses of operating the road are something over \$6,000,000; add to this the fixed charges, and we have something over \$9,000,000 that goes out, while the gross receipts show a fair surplus that is increasing. It is argued that in a normal year the road will increase its earnings at least \$2,000,000. Now the road has a vast export trade that it did not have before the business depression set in. With normal conditions and the export trade interested parties declare the road can increase its present showing \$1,500,000 or \$2,000,000 a year, thus providing a good surplus with which to pay 1½ or 2 per cent. dividends."

As an evidence of the export business of the Chesapeake & Ohio the following figures of shipments from Newport News, its tidewater terminus, may be given: The whole number of ocean steamers loaded there for 1896 was 234, carrying off 17,916 carloads of grain, 17,828 carloads of general merchandise, such as tobacco, flour, cotton, provisions, oilcake, etc.

A Combination of Electric Lines.

The Manufacturers' Record in a recent issue referred to the plan of the Cincinnati, Hamilton & Dayton to rebuild certain portions of its line for the use of electric motors. This plan is one of the most extensive which has been considered yet by any railroad company. As is well known, the Baltimore & Ohio, the Pennsylvania and one or two New England lines have adopted electric motors on sections for the purpose of aiding the steam locomotives in hauling trains up heavy grades, and for suburban trains.

In a letter to the Manufacturers' Record President D. G. Edwards, of the Cincinnati, Hamilton & Dayton Traction Co., a new company organized by the Cincinnati, Hamilton & Dayton Railroad Co., states that it will probably build and operate 100 or 200 miles of interurban railway within the next two years. It is expected by May 1 to operate seventeen miles of standard-gage

COTTONSEED OIL.

This department is open for the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

The Market for Cottonseed Products.

New York, N. Y., January 12. The cotton-oil market is steadier, and since our last considerable business has been done, while at this writing more animation is in evidence than for several weeks. The decline in ocean freight rates has been an incentive to shippers to purchase more freely, the firmness in tallow also being instrumental in diverting a considerable quantity of oil to the soap kettle. Quite a large volume of oil has been bought by the West direct from the mills, the ruling low prices and the probability of an advance proving a strong argument in favor of this course.

Lard is in a better position, and it is safe to assume that everything points to higher prices for oil before the expiration of January. For off-grade yellow today 23 cents was bid, January shipment. For prime yellow, spot, 23 cents is bid, and for January delivery 23½ cents is bid and 23½ cents asked. Enquiries from abroad are more numerous, and from reliable sources it is ascertained that oil is wanted in France as well as in England and other continental points. While receipts are of an average quantity, stocks here are not large. The present condition of the market is therefore encouraging, and it would appear as if the crushers who refused to unload at the recent low prices acted prudently. There is very little on offer at the mills at this writing, and taken in conjunction with the foregoing conditions, the fact that production is limited will still further strengthen the position of holders. English oil is firmer, and it is expected that an advance will be announced shortly, owing to the slackening up in the supply of Egyptian seed. The improvement in lard gives promise of a like condition in the compounded material, which latter has been neglected recently. Exports for the week aggregate 10,100 barrels, nearly half of which is destined for France, while England and Holland are again in the market. Receipts are 5310 barrels, probably half of which was purchased ex dock during the early part of the week at 22½ to 22½ for prime yellow, chiefly for export. The following are closing prices: Prime summer white, 26 to 27 cents; butter oil, 25 to 26 cents; prime summer yellow, 23 to 23½ cents; off summer yellow, 23 cents; prime crude, 19½ to 20 cents; off crude, 16 to 17 cents; prime crude, loose, 19 to 19½ cents, and soap stock, 5¢ per pound. With regard to crude, 16 cents is bid for prime, with 37½ cents freight rate. Renewed interest is evinced in white and butter oils, the principal trading being of a jobbing character, however, 26 to 26½ cents and 28 cents, respectively, being the prices asked and received. Liverpool quotes refined oil at 15s. 9d. per 112 pounds.

Cake and Meal.—There is nothing new to report concerning these products. The intervention of the holidays has had no effect on the volume of export business, as heavy shipments are reported from New Orleans and Galveston for Europe and the United Kingdom. The home demand is good, and prices are fairly well maintained. Meal is quoted at \$19.50 to \$20, and cake at \$19.50 jobbing. The abundance and cheapness of natural feeding stuffs here and abroad is the only obstacle to higher prices.

Cottonseed-Oil Notes.

The cotton-oil refinery and butchers of Corsicana, Texas, have annually from 1000 to 3000 pounds of grease suitable for soap-making, and are trying to find a practical soap-maker to come to Corsicana and engage in manufacturing soap. Some local capital will interest itself in the enterprise. Correspondence is invited by the Commercial Club.

The Calvert Oil Mill at Calvert, Texas, has been making a number of foreign shipments of late, both of crude oil and cottonseed meal. The company shipped on the 7th inst. ten carloads of cottonseed meal direct to Germany.

The market for cottonseed products in Texas is quiet, and the new year opens with prices for cottonseed oil at about the lowest recorded in the history of this industry. There is a better tone to values for cottonseed meal and cake, and shipments have been fairly active during the past year.

The following shipments of cottonseed products were reported last week from the port of Galveston, Texas: The steamship Turpie for Hamburg with 737 barrels of cottonseed oil, 40,388 sacks of cottonseed meal, 1639 sacks of cottonseed cake and 104 bales of istle, and the steamship Axminster for Rotterdam with 5808 barrels of cottonseed oil, 6320 sacks of cottonseed meal and 5600 sacks of cottonseed cake. The steamship Adra also cleared with 9449 sacks of cottonseed meal and other cargo.

In New Orleans the market for cottonseed oil is quiet, with prime crude in bulk 17 cents; prime summer yellow in barrels, 22 to 22½ cents; cottonseed meal and cake are steady at \$16.50 to \$17 per short ton, and \$18.75 to \$19 per long ton for export. Receivers' prices are quoted as follows: Cottonseed, \$7 per ton of 2000 pounds net to the mills, no commission of any kind to be added; cottonseed meal jobbing per carload at depot, \$16.50 to \$16.75 per short ton of 2000 pounds; for export per long ton of 2240 pounds f. o. b., \$18.25 to \$18.50 for current month; oilcake for export, \$18.25 to \$18.50 per long ton f. o. b.; crude cottonseed oil at wholesale or for shipment, strictly prime, in barrels, per gallon, 17½ to 18 cents; loose, per gallon, 16 to 16½ cents, according to location of mill; refined cottonseed oil, prime, in barrels, per gallon, at wholesale or for shipment, 22½ cents; cottonseed hulls delivered, per 100 pounds, according to location of mill, 11½ to 15 cents; linters, according to style and staple—A, 3½ to 3½ cents; B, 3½ to 3½ cents; C, 2½ to 2½ cents; ashes, none.

Iron Markets.

Cincinnati, Ohio, January 9.

The manufacturers throughout this district continue a careful, conservative course, and are devoting unusual time to liquidation, shaping their affairs and perfecting plans and policies for the future. Unfortunately, the condition of general business afford ample time for planning and adjusting, but those informed of the prosperous period Great Britain and Germany have enjoyed the past year, and are still enjoying at the expense of American industries and factories, are becoming impatient in the protracted depression this country has been and is suffering.

It is better that the recuperation of trade is slow, steady and healthy, and there is sufficient evidence of improvement to impart encouragement. While the market continues inactive, there is a better demand for pig iron, which it is hoped will gradually enlarge as steadily as the earliest risings of the sun each day, and ere spring shall come fresh im-

pulses of renewed life be felt and seen on every hand.

For the moment, prices are somewhat elastic, as quantity and delivery are important factors as to figures. For current business the prices below represent the market here.

We quote for cash f. o. b. Cincinnati: Southern coke No. 1 foundry. @ \$10.75 Southern coke No. 2 foundry. @ 10.25 Southern coke No. 3 foundry. @ 9.75 Southern coke, gray forge. @ 9.50 Southern coke, mottled. @ 9.50 Southern coke No. 1 soft. @ 10.50 Southern coke No. 2 soft. @ 10.00 Belfast coke No. 1, Lake Sup. 12.00@ 12.50 Belfast coke No. 2, Lake Sup. 11.50@ 12.00 Hanging Rock charcoal No. 1. 15.00@ 16.00 Tennessee charcoal No. 1. 13.00@ 14.00 Jackson Co. silvery No. 1. 13.50@ 14.00 Standard Alabama car-wheel. 14.75@ 15.50 Tennessee car-wheel. 13.50@ 14.50 Lake Sup. car-wheel & mall'e. 14.75@ 15.25

Philadelphia, Pa., January 9.

Expectations for the year, now in its infancy, run high. Business for the present in iron and steel is running light as far as our home market is concerned. The foreign demand, however, for Southern irons and for Bessemer billets, mining machinery and agricultural implements is on the increase, and prices realized are better than those ruling in the home market. The whole situation can be better defined before the close of this month. Cold weather and the state of the city treasury interferes with work on the City Hall tower, which was started some twenty years ago.

We quote for cash f. o. b. Philadelphia docks:

No. 1 X standard Alabama.	@ \$12.00
No. 2 X standard Alabama.	@ 11.50
No. 1 X standard Virginia.	@ 12.00
No. 2 X standard Virginia.	@ 11.50
No. 1 X lake ore iron.	@ 13.50
No. 2 X lake ore iron.	@ 13.00
Lake Superior charcoal.	15.85@ 16.35
Standard Georgia charcoal.	16.25@ 17.00

New York, N. Y., January 9.

The review of the first week of the new year in the iron trade is void of interest, so far as the week's transactions are concerned, nor is there much satisfaction in reviewing the record of the year 1896. While it was full of disappointment, and even of disaster, the American iron trade, as a whole, did not reach the end of the year in worse shape than it began it. Considering the dangers averted and the difficulties overcome, there is cause for congratulation on the year's business, in spite of all drawbacks.

All interest centres on what is ahead. It must be admitted that the wisest cannot look very far. The attitude for 1897, therefore, is one of simply awaiting events. Broadly speaking, conditions are full of promise. Looked at from the immediate point of view, however, the field is not clear. The influences that in the past have most powerfully stimulated business are present. They are abundant and cheap money, confidence in values, rapid acquisition to the national wealth in the excess of exports over imports and a short supply of goods in the hands of consumers.

Against all this is the recognized fact that the hard process of liquidation, which always follows a great panic, is not yet fully completed, and for the next three to six months more or less important changes in the tariff must be faced.

The most striking feature of the trade in all departments is unquestionably the low range of prices. The struggle of producers is for cheap cost, and consumers are getting the benefit. It will be strange indeed if a combination of about the lowest prices the world has ever seen in iron and steel products, with cheap money, does not produce an era of construction that will lead to the largest consumption of material we have yet had. It will certainly lead to a rapid increase in exports of raw and finished products.

The Western bank failures have created no special concern in Eastern markets, as they were recognized as due to

unsound banking, with abundant facts to prove that the cases are exceptional, and limited to a very small percentage. There is no want of confidence that the banks of the country are sound and strong.

The first signs of improving business come in the form of contracts for rails for electric and cable roads and for cast-iron pipe. A number of very important contracts in these lines have been closed within the week. Builders of Corliss engines also report their shops filling up with work. In the general jobbing trade dullness continues.

We quote for cash f. o. b. docks or cars New York:

No. 1 X standard Southern.	@ \$12.00
No. 1 X Virginia.	@ 12.00
No. 2 X Alabama or Virginia.	@ 11.50
No. 1 soft Alabama or Virginia.	@ 11.50
No. 1 X lake ore coke iron.	@ 13.50
No. 2 X lake ore coke iron.	@ 13.00
Lake Superior charcoal.	@ 16.35

ROGERS, BROWN & CO.

New Orleans Exports.

The variety of export articles now being shipped from New Orleans is indicated in the recent annual report of President McClosky, of the Board of Trade. The remarkable increase in grain shipments has caused special attention to be directed to this class of products, but the packing-house products and flour form an important item, as the following figures from the report show:

Exports.	1896.	1895.
Lard, pounds.	24,853,745	317,056
Canned beef.	1,078,745	221,625
Saluted beef.	378,930	291,080
Hams.	208,870	130,695
Flour, barrels.	268,152	91,130

It will be seen that the exports of lard increased eightyfold, and of flour three-fold, and these are but samples of what may be expected in the future in regard to the other products of the West, if the present favorable conditions are preserved.

The board has done all in its power to cement the commercial union of the South and West. It participated in the South and West Grain and Trade Congress at Charleston, and all other similar congresses. Mr. McClosky's remarks on the subject show what it has done in regard to trade with the West:

"Every effort has been made to foster a closer commercial relationship between the people of the great Western producing section and those located at the Southern outlet for their products. Whether from a closer commercial intercourse or from the inducements offered by our natural advantages for investment, we are realizing that our position and capabilities have attracted the attention of our Western grain-shipping friends, pork packers and millers, and the enterprising transportation lines to such an extent that we now find our facilities marvelously improved, with reduced port charges and an outpouring of the products of the West. The tide of grain exports has so continued to flow in this direction that New Orleans now ranks first in the shipment of corn for the past year."

W. N. Mitchell, freight agent of the Baltimore & Ohio Railroad at Atlanta, Ga., has issued a circular letter to traveling salesmen announcing a new departure. He has fitted up in his office in Atlanta a room for the accommodation of traveling salesmen who visit Atlanta and who do not intend to remain overnight. Desks are supplied, and a mail rack is at hand for the filing of letters. Travelers who wish to do so can have their mail sent in Mr. Mitchell's care and make his office their headquarters. This is quite a departure in the ways of the railroad world, but is in line with the enterprise and modern methods which characterize the present administration of the Baltimore & Ohio.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

LUMBER MARKET REVIEWS.

Baltimore.

Office Manufacturers' Record,
Baltimore, Md., January 14.

It is yet too early in the year to expect much activity in the local lumber market, and commission men and manufacturers have not concluded their settlements for 1896. There is, however, a better tone to the general market, and the outlook, although not as promising as it might be, indicates a fair amount of trade during the spring months. Receipts of lumber during the week have been light, and stocks are generally sufficient for the moderate demand current. In air-dried yellow pine sales are light, with prices nominally steady. Planing mills and box factories are not operating at their full capacity, and the demand from these sources is light. In kiln-dried North Carolina yellow pine the demand is better, and prices generally firm, with a higher tendency. White-pine men are having a somewhat better trade, and the movement is more active, with prices very steady. Cypress is dull and easy. The hardwood business is showing up better, especially to export trade, which is more active, shipments being now made promptly. The local demand for hardwoods continues light, and the transactions for the week have been mostly with out-of-town buyers. The collector of customs furnishes the foreign shipments of wood and its products from this port for 1896, which were as follows: Lumber 43,473,000 feet, joists 1,376,000 feet, shingles 58,000. The shipment of logs for the year were valued at \$512,041, and of staves \$90,410. The foreign exports of lumber for 1895 were 24,693,000 feet, and value of logs exported \$383,908.

The following list represents the prices current at this date:

[The quotations for yellow pine are for cargo lots, and for all hardwoods the figures indicate values for choice car lots.]

VIRGINIA AND NORTH CAROLINA PINE	
5-4x10 No. 2, kiln dried.....	\$12 50@ 13 50
5-4x12 No. 2, kiln dried.....	14 00@ 15 00
4-4x10 No. 1, kiln dried.....	15 00@ 16 50
4-4x12 No. 1, kiln dried.....	18 50@ 16 50
4-4 nar. edge, No. 1, kiln dried.....	18 00@ 14 00
4-4 wide edge, No. 1, kiln dried.....	17 00@ 18 00
6-4x10 & 12, No. 1, kiln dried.....	23 00@ 24 00
4-4 No. 1 edge floor., air dried.....	13 50@ 14 50
4-4 No. 2 edge floor., air dried.....	10 50@ 11 50
4-4 No. 1 12-in. stock, air dried.....	15 50@ 16 50
4-4 No. 2 12-inch stock.....	12 50@ 13 50
4-4 edge box or rough wide.....	7 50@ 8 50
4-4 edge box do. (ord. widths).....	6 50@ 7 50
4-4 12-inch rough.....	9 00@ 10 00
3/4 narrow edge.....	5 50@ 6 50
3/4 wide.....	6 50@ 7 50
3/4x1 1/2 and 10 1/2-inch.....	8 50@ 9 50
Small joists, 2 1/2-12, 14 and 16	
long.....	7 50@ 8 50
Large joists, 3-16 long and up.....	8 00@ 9 00
Scantling, 2x3, 2x4 and 3x4.....	7 00@ 8 00

WHITE PINE.	
1st and 2d clear, 4-4, 5-4	
and 8-4.....	47 00@ 48 00
3d clear, 4-4, 5-4, 6-4 and 8-4.....	42 00@ 43 00
Good edge culls.....	14 00@ 15 00
Good stock.....	16 00@ 17 00

CYPRESS.	
4-4x6, No. 1.....	20 50@ 21 50
4-4x6, No. 2.....	14 50@ 15 50
4-4x6, 16 feet, fencing.....	10 50@ 11 50
4-4x6, rough.....	8 50@ 9 00
4-4 rough edge.....	8 00@
4-4 edge, No. 1.....	16 00@ 17 00
4-4 edge, No. 2.....	12 00@ 13 00
Gulf, 4-4, Nos. 1 and 2.....	28 50@ 30 50
Gulf, 6-4, Nos. 1 and 2.....	31 00@ 32 00

HARDWOODS—WALNUT.	
5-8, Nos. 1 and 2.....	65 00@ 75 00
4-4, Nos. 1 and 2.....	80 00@ 90 00
5-4, 6-4 and 8-4.....	85 00@ 95 00
Newell stuff, clear of heart.....	85 00@ 100 00
Culls.....	20 00@ 30 00

OAK.	
Cabinet, white and red, Southern, plain-sawed and good, 1 and 2, 8 inches and up, 12 to 16 feet long, 4-4.....	30 00@ 34 00
Quartered white, Western, 1 and 2 quality, all figured, 6 inches and up wide, 4-4.....	53 00@ 55 00
Culls.....	10 00@ 15 00

POPLAR.	
Nos. 1 and 2, 5-6.....	24 50@ 25 50
Nos. 1 and 2, 4-4.....	28 00@ 30 00
Nos. 1 and 2, 6 and 8-4.....	32 50@ 33 50
Culls.....	11 50@ 12 50

SHINGLES.	
Cypr., No. 1 h'nts, sawed, 6x20.....	6 50@ 7 50
No. 1 saps, sawed, 6x20.....	4 75@ 5 25
No. 1 hearts, shaved, 6x20.....	5 00@ 7 00
No. 1 saps, shaved, 6x20.....	5 00@

	LATHS.	
White pine.....	2 50@ 2 75	
Spruce.....	2 10@ 2 20	
Cypress.....	2 10@ 2 20	

Norfolk.

[From our own Correspondent.]

Norfolk, Va., January 11.

The general tone of the lumber market has been fairly active during the past week, but so far this year there are few indications of any marked increase in the demand. There has been, however, a slightly better inquiry, and some shipments are being made, while a few very good orders have been booked during the week. It may be stated, however, that the actual business of the new year has not fairly commenced, and transactions have been retarded by stock-taking and the occurrence of the holidays. The various mills at this port and at adjacent points in the State and North Carolina are nearly all running, while a number have been recently overhauled and put in good shape for sawing during the spring and summer months. Air-dried lumber is quiet, and prices are still unsatisfactory. Kiln-dried North Carolina yellow pine is in better demand, and values very steady, with stocks generally light and certain grades and dimensions scarce. This port is reaching out for a foreign lumber trade, and it is probable that in the near future the United Kingdom and Continent will be large buyers. The Tunis Lumber Co. is now filling an order of 5-4 and 6-4 stuff for export, and the shipment will be superior as to finish, etc. Planing mills are now busy, and are running regularly, but are not pushed to complete orders on file. There is a fair business among all woodworking concerns, while the general trade of the port is active. The list of December's exports of cotton and other commodities from this port, as tabulated by the collector of customs, shows the largest total of any month in the history of the city, and a marked increase over every other month in the year, being \$4,020,047, or \$720,043 more than November's total. The foreign shipments of logs, staves, headings and other wood products for December were valued at \$236,685. There is a moderate offering of handy-sized vessels, and lumber freights are steady, and vessels to New York are asking \$2.50, while rates to other ports are unchanged. Among the charters reported in New York last week were three schooners—Virginia Rulon, 266 tons, Florence Leland, 327 tons, and J. Frank Seavey, 392 tons, from Norfolk to New York with lumber at \$2.10, \$2.15 and \$2.10, respectively, and schooner Nellie J. Crocker, 349 tons, from Norfolk to Boston at \$3.

Charleston.

[From our own Correspondent.]

Charleston, S. C., January 11.

Business in all departments of the lumber market has ruled quiet during the past week, as usual at this period of the season. There is, however, a fair demand for good grades of lumber, and at Georgetown and other milling points there are a number of vessels loading and others ready to proceed to sea. A number of those engaged in the lumber industry are somewhat disappointed at the situation, and expected a more active business at the opening of the new year. Manufacturers, however, are disposed to look cheerfully upon business conditions, and are of the opinion that this will be a fairly active season in the lumber trade. Prices for desirable material are generally firm, and at the close on Saturday ranged as follows: Merchantable lumber, \$14 to \$16 for city-sawed, \$12 to \$14 for railroad; square and sound, \$9 to \$13 for railroad, \$8 to \$11 for raft; dock timber, \$4.50 to \$6.50; shipping, \$8.50 to

\$10.50. There is a fair demand for shingles at \$5 per thousand. During the past week the shipments of lumber were as follows: For New York schooner J. H. Parker with 406,000 feet; schooner Florence Randall with 540,000 feet; Georgetta Lawrence with 236,000 feet; schooner John R. Halliday with 310,000 feet, and by the Clyde Line steamers 10,000 feet. The schooner Nellie Coleman cleared for Port Antonio with 75,000 feet of lumber. The total clearances of lumber and other wood products from this port from September 1, 1896, to January 8, 1897, were 23,509,978 feet domestic and 569,000 feet foreign, making a total of 24,078,978 feet, against 25,333,814 feet in 1895-96. Lumber freights continue firm, with rates unchanged. The offering of handy-sized vessels is moderate, and the rates on yellow pine to New York and sound ports are \$4.38 to \$4.50, and proportionately for ties; ties, 14 to 14 1/2 cents; oak ties, 19 cents; dry lumber to Providence, \$4.50. The schooner L. V. Beebe was chartered last week in New York to load lumber at Charleston for Boston at \$5 and ties at 15 cents, coal out from Newport News at 85 cents; schooner Dove, 108 tons, from Wilmington, N. C., to Grenada with lumber at \$6, and a schooner, 422 tons, from Wilmington, N. C., to Boston with lumber at \$4. The schooner Kate Darlington was loading lumber and shingles last week at Gardner & Lacy's mill at Georgetown for New Haven.

Savannah.

[From our own Correspondent.]

Savannah, Ga., January 11.

At this and nearby ports of Georgia there is considerable activity in the lumber trade, and while it is yet too early in the year to speculate on the volume of trade later on, there is every indication that there will be a substantial revival in this industry. The demand from Northern and Eastern sources is improving, and a better foreign business is being cultivated. The reports from nearly all milling sections of Southern Georgia show considerable activity among manufacturers, and a number of those engaged have as much business as they can handle. The weekly shipments of lumber and other wood products from this port are of better volume, and shippers generally are doing a good trade this season. Of the general business of the port, everything presents bustle and activity at the moment, denoting a healthy movement of trade in shipments of cotton, naval stores, lumber, etc. Manufacturers of lumber hold their stock at outside figures, and for desirable material prices are firm, the market closing on Saturday as follows: Ordinary sizes, \$11 to \$12; difficult sizes, \$13 to \$18; flooring boards, \$15 to \$22; shipstuff, \$16.50 to \$20, and sawn ties, \$10. The following vessels cleared during the week with cargoes of lumber and other wood products: Schooner Charles F. Davis for Chester, Pa., with 147,078 feet of pitch-pine lumber and 5365 crossties; schooner C. C. Wehrum for New York with 25,903 feet of lumber and 1240 crossties; schooner Jennie Thomas for Baltimore with 489,478 feet of lumber, and schooner Horace P. Shares for Perth Amboy with 9409 crossties. Boston steamers took out 6720 feet of lumber, New York steamers 25,000 feet and Philadelphia steamers 15,000 feet. The schooner Lillie, from Barbadoes, is in port, and is chartered by the Georgia Lumber Co. to load for Parabaiba. Lumber and timber rates of freight are steady at \$4 to \$4.50 for a range including Baltimore and Portland, Me. To the West Indies and Windward islands, \$4.50 to \$6.50; shipping, \$8.50 to

Buenos Ayres and Montevideo, \$10 to \$11; to Rio Janerio, \$14; to Spanish and Mediterranean ports, \$11.30 to \$11.50. The schooner J. S. Winslow, 824 tons, was chartered last week to load at Brunswick with crossties for New York at 14 1/4 cents.

Pensacola.

[From our own Correspondent.]

Pensacola, Fla., January 11.

Since the opening of the new year the general trade of this port has been more liberal in volume, and the arrival of vessels since the 1st inst. has instilled new life into the commercial men of the city. Manufacturers of lumber and timber are still very firm in their views, and refuse to sell their material except at outside figures. Shippers are looking forward to a period of considerable activity during the next three months, and from the number of vessels chartered to load here an active movement is expected. There has been a good demand for lumber lately, and mills at this point and nearby milling sections have now all the orders they can well fill at the moment. There are numerous inquiries from South America, and the foreign demand is increasing. Advices from Great Britain and the Continent are more encouraging, and prices for timber and lumber are generally very steady, with account sales coming to hand much more satisfactory. During the past week the following shipments of lumber and timber are reported: Ship Iquique for Liverpool with 1,345,000 superficial feet of sawn timber and 50,000 feet of lumber; bark Ano for Huelva with 24,443 cubic feet of sawn timber and 41,000 feet of lumber; bark Osmo for Havre with 562,000 feet of sawn timber and 10,000 feet of lumber; bark Adolf for King's Lynn; bark Madelena G. for Naples with 21,837 cubic feet of hewn timber and 203,000 superficial feet of sawn timber, and steamship Maria with 2790 boat oars, 187 sacks of axe-handles and 35,000 feet of lumber among her cargo for Liverpool. Among the charters reported in the New York market last week were the following vessels: Steamer Lord Kelvin, 2158 tons, hence to the United Kingdom or Continent with sawn timber at 10 1/2, March-April; Norwegian bark Homewood, 1065 tons, hence to United Kingdom with sawn timber at 9 7/6; Russian bark Vesta, 354 tons, and Swedish bark Peter, 493 tons, hence to the United Kingdom or Continent with sawn timber at 10 5/4, and bark Bolivia, 921 tons,

avenue of the industry business has begun to show an improvement. Indeed, the general trade of the port is very active at present, and at one time last week there were twelve steamers in port, and eight more are due to arrive. The shipments of timber are beginning to commence, and in lumber there is an active demand from Central and South America and the United Kingdom. Sawn timber is in fair demand at 11 to 11½ cents per cubic foot, 40-foot basis. There is a fair demand for cypress timber at 5 to 8 cents per cubic foot. Pine saw logs are quoted \$5 to \$7.50 per thousand. Hewn timber is in good demand, with stocks light, and when placed upon the market will bring 11 to 12 cents per cubic foot on basis of 100 cubic feet, average B1 good. There is no demand for hewn oak or poplar. Saw mills at this port and adjacent points in this State and Mississippi are all running regularly, and are well supplied with orders. The demand from South America is at present very good, and some large cargoes were cleared during the past week. Among the clearances during the week the following vessels are reported: Ship Hilliard for Rio de Janeiro with 1,128,079 feet of lumber; schooner Seran for Buenos Ayres, A. R., with 574,029 feet; ship Otterspool for Montevideo with 1,398,068 feet; bark Nebo for Southampton with 31,824 cubic feet of sawn timber and 12,015 superficial feet of lumber; barkentine Bingey for Newcastle, England, with 46,500 cubic feet of sawn timber; bark Arizona for Fleetwood, England, with 71,645 cubic feet of sawn timber and 2058 feet of lumber, and schooner Mascot for Rutan, Spanish Honduras, with 20,000 feet. Lumber and timber freights are firm, with a moderate offering of tonnage. Rates on lumber are still \$5.50 to \$6.50 to the West Indies and \$5.50 to \$6 coastwise; Cuba, north side, \$5, Spanish gold; south side, \$6; River Plate, \$10.50 to \$11, American gold, and Mexico, \$6.50 to \$7; timber to the United Kingdom, 30/- per load for hewn and 97/6 per standard for sawn. The following vessels were chartered last week in New York: Steamer Iaederen, 273 tons, from Mobile to Lisbon or Oporto with staves on private terms, and Norwegian ship Cannte, 1338 tons, from Ship Island or Mobile to the United Kingdom or Continent with sawn and (or) hewn timber at 97/6 and 30/- respectively.

Beaumont.

[From our own Correspondent.]

Beaumont, Texas, January 9.

The past week has produced little of interest in lumber circles in this vicinity. The home markets have not afforded the demand noticed last month, but sufficient orders are on hand and being received to keep the mill crews all busy. The recent very heavy rains have handicapped shipments to some extent, and have probably been one cause of the decreased orders noted. The export trade via Sabine Pass shows, on the contrary, no need of a stimulant. Lumber shipments have kept the wharves in a busy state, and present indications predict an unusually busy month. The Reliance Lumber Co. reports having just chartered three vessels, which will carry away, all told, about 1,500,000 feet. The same company last month cleared five vessels from Sabine Pass, and its entire shipments for the month from the one mill were over 3,300,000. In addition to this amount, in order to fill out its shipments, a large part of which was for export, it bought of other mills about 1,125,000 feet. The other mills show a proportionate business, and have good lists of orders for export ahead. The Southeast Texas

Telephone Co. has completed its line between here and Sabine Pass, and is now offering exporters facilities which they have not enjoyed since the old telegraph line was abandoned, some ten or twelve years ago. It is said among those engaged in the export trade that the proposed improvement in wharfage to be made by the firm of Kountz Bros. will be a dock extending out about 700 feet. The demand for better facilities to handle the lumber exports is becoming daily more apparent, there being frequently fifteen vessels engaged in the export trade in port at one time.

Lumber Notes.

Judge E. B. Rosser has been appointed receiver for the Dixie Lumber & Manufacturing Co., of Atlanta, Ga.

The Spanish bark Tafalia sailed last week for Valencia, Spain, with a cargo of 689,000 feet of lumber, valued at \$8456, from Maynello & Co.

Mr. T. M. Michaels, of Knoxville, Tenn., is building an addition to his sash, door and blind factory in that city, thereby increasing its capacity.

The largest of the two saw mills owned and operated by the Clay Lumber Co. at Porter, Clay county, W. Va., was destroyed by fire on the 5th inst. The loss is estimated at \$1500, with no insurance.

A charter was granted last week to the J. V. Porter Lumber Co., of Poplar Bluff, Mo. The capital stock is \$10,000. The incorporators are Sarah A. Porter, W. A. Russell, T. L. Wright and others.

The saw mill owned and operated by W. H. Spinks, near Wells, Cherokee county, Texas, was burned on the 31st ult., together with 60,000 or 70,000 feet of lumber; loss about \$5000, with no insurance.

At the city commissioners' meeting held at Darien, Ga., on the 7th inst. the following gentlemen were elected public inspectors of timber and lumber: W. S. Mallard, D. J. Powers, A. C. Wally, O. Hopkins and M. D. Dunwody.

Mr. Jeremiah Grimes turned loose on the 6th inst. 500,000 feet of pine timber in the Neches river, near Colmesneil, Texas, and will run it to Beaumont. Several million feet of timber was expected to go out on the rise.

Mr. William M. Wilson, recently in the employ of R. T. Waters & Son, of Baltimore, and Mr. T. A. Charshee, of Greenleaf Johnson & Son, have formed a copartnership to do a lumber commission business, with headquarters in Baltimore.

Mr. Parker Dix, who for a number of years has been in the employ of R. T. Waters & Son, of Baltimore, and recently in charge of the New York office of the firm, has been placed in charge of the lumber department of the Baltimore office.

The full-rigged Spanish ship Rosa Aligret cleared from Brunswick, Ga., last week with a cargo of 980,000 feet of lumber, being the largest ever shipped from that port. She drew over twenty-two feet, and was loaded by Benito Padrosa.

Mr. H. L. Merritt, of Blenheim, Ont., has decided to engage in the manufacture of spokes and handles in the Southern States, and will shortly move to this section. Mr. Merritt is prepared to correspond with makers of machinery for the business in which he will embark.

The Greensboro Spoke and Handle Works, near Greensboro, N. C., having secured a better site for business beyond the city limits, has been enlarged by the addition of new machinery and a new engine of sixty horse-power. They are

working a good force of men and doing a satisfactory business.

The Ryan-Richards saw mill, situated on the lake at Lake Charles, La., has sold to Norris & Beatty, of Houston, Texas, all the lumber now in its yards, which will amount to 3,000,000 feet, together with the entire output of the plant for 1897, which means a quantity not less than 10,000,000 feet.

Mr. A. Benner, operating a saw mill near Courtland, Ala., is making a shipment of fifteen carloads of first-class oak lumber, which is to be divided between New York, Washington and Atlanta. A detail in connection with the consignment is that 90,000 feet of extra quartered oak is for export to Germany.

A meeting of the creditors of the Portsmouth Lumber Co. was held at Norfolk on Saturday last to devise ways and means for operating the mill in Norfolk and the Norfolk & Carolina Railroad, which belongs to the company. A committee was appointed to investigate the condition of the company and report.

A charter was granted last week to the Waccamaw Lumber Co., of Bucksport, S. C. The incorporators are Chester A. Albright, Philadelphia, Pa.; Robert Laidlaw and Wm. H. Kessler, Bucksport, Horry county, South Carolina. The capital stock is placed at \$25,000, and shares at \$100 par value.

A new scheme of exportation of lumber is growing with the mills at Lake Charles, La. During the past month over 1,000,000 feet of sawed lumber was loaded on barges, towed down the Calcasieu river and around to Sabine Pass, thirty miles distant, where it was loaded on the ship Norman, bound for African ports.

Shipping lumber by barges is to be a prominent feature in the business of the port of Brunswick, Ga., this year. Mr. N. Emanuel, who introduced the barge feature by bringing the Forrest Belle last year, has now on the way to Brunswick one of the largest barges afloat, which will carry from 35,000 to 40,000 crossties.

The machinery, factory and stock of vehicles of the Hatcher Manufacturing Co., of Columbus, Ga., were sold last week, pursuant to an order of the court. The machinery, etc., brought \$3900, and the receipts from the balance of the stock swelled the amount to \$5000. Messrs. John T. Davis & Co. were the purchasers.

The plant of the Paige Lumber & Manufacturing Co. was sold last week at Harriman, Tenn., to Mr. S. K. Emery, of that city, for \$7200. In addition to plant, a quantity of raw material and unfinished work was included in the sale. The timber on eight acres of land on White's creek was sold separate from the plant, S. K. Emery becoming the purchaser for \$105.

The Lumbermen's Exchange, of St. Louis held its annual election of officers and officers were elected: F. H. Smith, president; E. R. Darlington, vice-president; Alce Stewart, J. H. Johanning, Kelly R. Chandler, M. J. Heller, J. N. McReery, directors. The new board of directors and the officers were installed on Monday last.

During the month of December, 1896, there were measured at the public boom in Darien 4,000,000 feet of square, scab and sawn timber. During the past month there was shipped, coastwise and foreign, 4,570,760 feet of hewn and sawn timber and lumber. There are now in port at the different booms no less than 29,000,000 feet of all kinds of timber

awaiting shipment, coastwise and foreign.

Among the new charters reported at Beaumont, Texas, are the following: Schooners Thomas Winsmore, Asa T. Stowell, Anita Berwind, Iolanthe and Celer, to load at Sabine Pass. The Reliance Lumber Co. has chartered the schooners S. P. Hitchcock, Austin D. Knight and John F. Krark, which will take cargoes from Sabine Pass aggregating 1,450,000 feet.

The Big Woods Lumber Co., of Miller county, Arkansas, was reorganized last week, and the following officers elected: George W. Fouke, president; Ben Collins, vice-president; Hugh Corry, secretary, and Joe Fuqua, treasurer. The mill will be put in thorough repair and run at its full capacity. It is stated that the company will construct nine miles of railroad to log the mill.

It is stated that the East Tennessee Timber & Mining Co., a corporation organized by James F. Brooks, banker, of Boston, Mass., with headquarters at Newport, Tenn., has closed various trades whereby it becomes owner of several hundred thousand acres of iron and timber lands in Cocke and Sevier counties. It has purchased a large river frontage near Newport, where it will erect a large plant for cutting timber.

The extensive saw-mill plant, now in course of construction by the Bradford Lumber Co. near Montechara, in Alachua county, Florida, will soon be ready for operation. The company has purchased ten sections of land in Alachua and Bradford counties, which is heavily timbered. The mill is connected with the Florida Central & Peninsular Railroad by a spur seven miles long, which connects with the railroad near Fairbanks.

The charter of the Crockett Tram & Lumber Co., of Crockett, Houston county, was filed on the 4th inst., with a capital stock of \$100,000. The company will build saw mills, manufacture lumber, shingles, ties and other wood products, and transact a general lumber and timber business anywhere in the State of Texas. The incorporators of the company are W. C. Teter, of Minneapolis, Minn.; D. A. Nunn, A. H. Wootters, John B. Smith, A. A. Aldrich, of Crockett, Texas; J. H. Ratcliff, of Ratcliff, Texas, and T. F. John, of Coltharp, Texas.

It is stated that J. T. Harahan, general manager of the Illinois Central Railway system, has granted a concession to the forestry department of the Tennessee Centennial in the way of free transportation on the forestry exhibit over the Illinois Central system. The same concession had been previously granted by the Louisville & Nashville Railway Co. and the Nashville, Chattanooga & St. Louis Railway Co. It is the understanding that these exhibits, after being displayed at the Tennessee Centennial, will be held for the universal exposition at Paris, France, in 1900.

Among the heavy shipments of lumber from the mills at Beaumont, Texas, during December, 1896, were the following: The Reliance Lumber Co., with one mill, shipped 4,451,779 feet, of which only 1,113,034 feet were purchased, leaving net shipments for its mill of 3,338,745 feet, said to be the largest month's shipments ever made by any single mill in Texas. The Beaumont and Nona Mills Companies made net shipments from their mills during the month of 4,184,042 feet. These companies also sawed in addition large quantities of square timbers for export. Shipments from other mills were also good, and a steady trade is expected during the current year.

MECHANICAL.

Steam Economy and Grate Bars.

During the last six or seven years great changes have been brought about in the economic generation of steam in and about the collieries of the anthracite region of the East by the use of the dirt banks and refuse coal as fuel. It has been demonstrated by practical test, involving the use of a suitable grate bar and steam blower, that the same source of economy may be practiced in coke regions by the utilization of refuse coke, and thus every pound of merchantable coal may go to market. Involving, as it does, the question of the economical generation of steam, this possibility should at once claim the attention of steam-users everywhere. Boiler-rooms of industrial establishments are often the most expensive parts of the plants. Unless the most improved appliances and skilled firemen are employed, the cost of power becomes excessively high. This applies with equal force to the steam plants in collieries, for notwithstanding the apparent cheapness of the fuel, it must not be overlooked that every extra ton of marketable coal burned costs the operator the market price of that coal, less the freight.

Special attention is now paid to the preparation and marketing of the smaller sizes of anthracite produced. The huge culm banks that have been accumulating for years are either being used by local steam plants for fuel or the "No. 2 buckwheat" and "bird's-eye" sizes are being screened out of them for shipment to manufacturers, who realize that these small cheap sizes make ideal fuel for steam purposes. It is a remarkable statement, but it is a true one,

that in the city of Scranton steam for manufacturing purposes is produced cheaper than in any other city in the world. This is due to the exclusive use of anthracite culm as steam fuel.

Finally, when No. 2 buckwheat came into use, the openings in the grate were necessarily made so small that to obtain sufficient air space and ensure complete combustion an enormously large grate area was required.

A movable grate bar has recently been placed on the market by the Leisenring

Manufacturing Co., of Scranton, Pa., to overcome such objections. With this bar, used in connection with any good blower, the finest sizes of anthracite coal, anthracite culm or bituminous slack can be used, and complete combustion can be obtained without loss of fuel through the air spaces.

This grate has already been subjected to practical tests by sixteen mining and manufacturing firms in the Lackawanna, Wyoming, Lehigh and Schuylkill regions, and each of these parties state that the grate has fully met the expectations of the purchasers and the claims of the inventor.

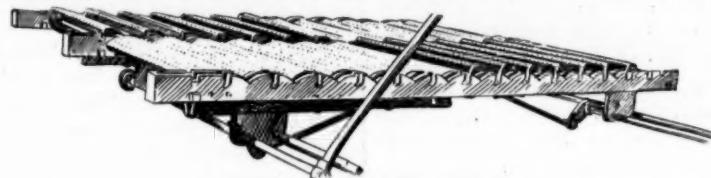
Among the many commendable features of this grate are the absence of

falling through the grate or is pulled out the furnace door with the ashes. With the Leisenring grate there is no loss of fuel.

As is well known, extreme or sudden changes of temperatures under boilers soon cause damage. Such changes are inevitable with old-style grates, but they can be controlled when Leisenring grates are used, by simply adjusting the size of the air spaces. This can be easily and almost instantly accomplished.

Improved Dimension Planing and Jointing Machine.

This is a powerfully-constructed machine, designed to meet the requirements of large mills, which demand a specially



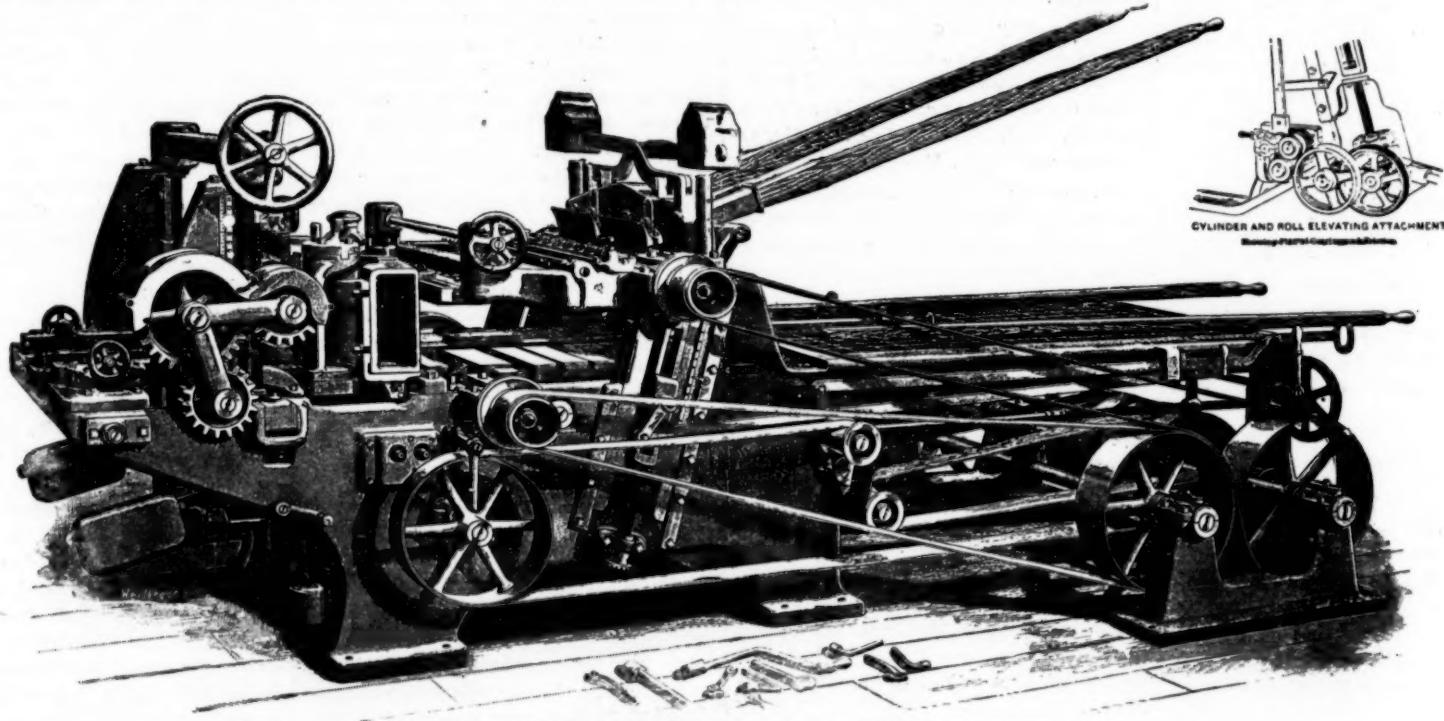
THE LEISENRING GRATE.

heavy machine adapted to plane dimension timber on two, three or four sides, as well as capable of doing every variety of surface planing. Its construction is such that two pieces of material can be worked at the same time, thereby doubling its capacity over ordinary machines. Every part is thoroughly and carefully made, and in that substantial manner which is required in a machine for the heaviest mill work.

The frame is massive in construction, with plate sides supporting the upper and lower cylinders, a heavy endless traveling bed, feeding-out rolls and side-cutting heads. It will surface material on two sides up to thirty inches wide and fourteen inches thick; will plane all four

open belts six inches wide, giving ample power. It is supported in a heavy frame that can be raised and lowered automatically by a system of gearing controlled by a hand lever at the feeding-in end of the machine, the movement being indicated by a gage placed on the table at the left hand of the operator. It may also be raised or lowered by hand. When the required position of the cylinder is reached it may be securely locked from the feeding end of the machine by the movement of a lever. The lower cylinder has journals two and one-quarter inches in diameter, lead-ground, carries three knives, is driven by two open belts and is adjustable for different thicknesses of cut.

The side cutting-heads are made of steel, slotted on all their faces, and carry four knives. The side spindles are one and fifteen-sixteenths inches diameter where the heads are received, and two and three-sixteenths inches diameter in the bearings, and run in heavy connected bearings having top bearing support. Their supporting frames are separately adjustable across the face of the machine, and with the fence guides may be adjusted from the feeding-in end as well as the side of the machine while it is in operation. There is an index on each side of the machine at the feeding-in end, indicating the exact position of the side heads and guides at all times. Each side head is furnished with a new and improved weighted matcher clip, with steel chip-breaking lips, which is considered indispensable for working cross-grained and knotty lumber, producing rapid and accurate work. The clip is made in two sections, accurately planed and fitted. Loosening two bolts allows the clip to be instantly removed, and gives free access to the knives for setting



IMPROVED DIMENSION PLANING AND JOINTING MACHINE.

that in the city of Scranton steam for manufacturing purposes is produced cheaper than in any other city in the world. This is due to the exclusive use of anthracite culm as steam fuel.

Bituminous slack, if burned properly, is also an excellent steam fuel, and a cheap one. It is possibly the equal in this respect to anthracite culm, except in one particular, and that is its disagreeable and dirty smoke; but this can be at least partially avoided by the use of smoke-preventing appliances. And at any rate, it is no worse in this respect than the large coal of the same nature.

To accomplish the satisfactory combustion of the fine coals under consideration, a number of valuable special ap-

pliances have been invented. Chief among these have been the appliances for the production of a forced draught. Next in importance were the changes made in the grates. As the use of smaller sizes of fuel advanced it became necessary to reduce the size of the openings, or air spaces, so as to prevent the unconsumed fuel from falling through into the ash pit.

The economical features are as follows: Owing to the easy adjustment of the size of the air spaces, a saving of from 15 to 20 per cent. is effected in the fuel. When old-style grates are used there is a loss of from 100 to 200 pounds of coal per set of boilers each time the fire is cleaned with a scraper. The coal either

falls through the grate or is pulled out the furnace door with the ashes. With the Leisenring grate there is no loss of fuel.

As is well known, extreme or sudden changes of temperatures under boilers soon cause damage. Such changes are inevitable with old-style grates, but they can be controlled when Leisenring grates are used, by simply adjusting the size of the air spaces. This can be easily and almost instantly accomplished.

This is a powerfully-constructed machine, designed to meet the requirements of large mills, which demand a specially

heavy machine adapted to plane dimension timber on two, three or four sides, as well as capable of doing every variety of surface planing. Its construction is such that two pieces of material can be worked at the same time, thereby doubling its capacity over ordinary machines. Every part is thoroughly and carefully made, and in that substantial manner which is required in a machine for the heaviest mill work.

The frame is massive in construction, with plate sides supporting the upper and lower cylinders, a heavy endless traveling bed, feeding-out rolls and side-cutting heads. It will surface material on two sides up to thirty inches wide and fourteen inches thick; will plane all four

rolls, placed after the lower cylinder for feeding the material entirely away from the machine. The feed is controlled by a tightening device on the feed belt. Speeds of feed usually furnished are forty feet and sixty feet per minute, but if desired faster feeds can be supplied. There are two independent pressure-bars before the cut of the upper cylinder, which prevent splintering or tearing out, and a pressure roller after the cut to retain the material in position after it passes the upper cylinder. By means of a new weighting device a positive pressure is applied to the material at all times. Attached to each divided roll is a socket for receiving a lever which is in convenient reach of the operator. By means of these levers the rolls and pressure-bars before the cut of the cylinder are instantly raised to suit any varying thickness of the material to be planed. The pressure-bar after the cut of the lower cylinder is adjustable to always bring it on a line with the cutting diameter of the cylinder, and the pressure-bar over the lower cylinder is adjustable vertically, independently of its being raised in connection with the upper cylinder, and can be swung out of the way when adjusting or sharpening knives. Pressure shoes are attached to this bar over the lower cylinder reaching to the centre line of the side heads, for the purpose of holding material firmly to the bed between the lower cylinder and side heads.

The upper cylinder, the upper pressure-bars and rolls and the feeding-out rolls are all adjustable automatically, so that when it is necessary to change the width or thickness of the timber being worked it can all be done from the operating end of the machine simultaneously without any loss of time. The feeding-out rolls are provided with a device, operated by a lever shown, which disconnects them from the automatic raising attachment, for the purpose of independent adjustment.

J. A. Fay & Co., 270-290 W. Front street, Cincinnati, Ohio, are the manufacturers.

Use of Compressed Air on a Great Work

The wide application of compressed air affords many interesting examples of its application. One of general interest is the service to which this power is put on the extensive work in the construction of the Jerome Park reservoir for the water-supply system of New York city. As the contract amounts to nearly \$5,500,000, and will extend over about seven years, there was ample reason for carefully considering the comparative advantages and economy of different methods of supplying power for the drills, hoists, pumps, etc., to be used on the work, and as a result of this investigation it was decided to use compressed air, distributed to all parts of the work by pipe lines from a central power plant. This plant is operated by one engineman and one fireman. The main pipe lines will remain practically permanent during the work, the branches being shifted and extended as required by the progress made in excavation. This system will undoubtedly effect a considerable saving in fuel and labor expenses as compared with the more common methods.

The point where the economy is immediately effected is in the operation of the drills, hoists and pumps. Ordinarily these would be run by separate boilers, requiring the attendance of an engineer and stoker, and the extra labor of hauling fuel and water to each boiler. This performance is dispensed with by the air power being transmitted from the central station.

Aside from the reduction in expense,

the convenience of having a power that can be used at any moment and without the annoyances attending the care of individual boilers for each machine facilitate the work vastly.

The whole work of excavation is reduced to as small a use of human effort as can well be devised at this time.

With the use of steam for the operation of drills, considerable water—condensed steam—collects in the pipe, even in the short time consumed in changing bits or moving from one hole to another. This must be worked out through the exhaust before the drill can begin to do good work. If this water from the different drills and pumps could be collected, it would be found to amount to a great many barrels in the course of a day. Each cubic foot of water wasted by condensation represents one horse-power. There is another and serious loss with steam—that of loss of capacity of the drills. With full pressure of dry elastic compressed air at the drills, more work will be done than by the wet steam, a less number of drills, drill runners and helpers are required for the same work, and these various reductions in the payroll and coal bill may amount to the cost of the plant before it is worn out. It is a common expression of quarrymen who have adopted compressed air after using steam, that "two drills will do more work with air than three with steam."

There are several other items, repre-

senting a saving of about 300 acres of land, and will have a capacity of 2,000,000,000 gallons. The construction will require about 4,000,000 cubic yards of earth excavation, 3,200,000 cubic yards of rock excavation, 150,000 cubic yards of concrete masonry, 82,000 cubic yards of brick masonry, 113,000 cubic yards of rubble masonry and 250,000 square yards of rubble masonry facework. The masonry includes heavy core walls for the embankments. The bids for the work ranged from about \$5,000,000 to \$13,000,000, and the contract was awarded in August, 1895, to Mr. John B. McDonald, of Baltimore, Md., and New York city, at \$5,473,060. Preparations for commencing the work were at once started, and the work is now in active progress. At the present time about 550 men are at work, while the plant includes eight narrow-gage contractors' steam locomotives, two steam shovels, eighteen derrick hoists, ten drills and a number of wagons, teams, dump cars, etc. Besides this, offices, living quarters, stables and stores of all kinds of materials and supplies have been established, as the work will last for about seven years, the date set for the completion of the contract being November 1, 1902.

The contract for the air-compressing plant was placed by Mr. McDonald with the Ingersoll-Sergeant Drill Co., of New York city, and this has now been in-

eight-inch main is intended to be laid later, in a direction opposite to that taken by the present eight-inch main. All the pipe has screwed joints. There is one re-heater on the four-inch pipe line, this being of the Sergeant pattern. The heater is a truncated cone three feet six inches in diameter at the base and four feet six inches high, the centre of which forms a stove; the air enters at the top and passes down over the heating surface, the volume of air space increasing as the air expands, so that the velocity and friction remain practically constant. The use of this re-heater is said to increase the efficiency 33 per cent. over work done by the same volume of air used cold. The air pressure is designed to be seventy-five pounds per square inch at the compressor and seventy pounds at the tools.

The drills used are of the well-known Ingersoll-Sergeant make. The hoisting engines are of the Lidgerwood make, with two cylinders 7x10 inches and double drums. In the building of the masonry core walls for the embankments a row of derricks is erected, each derrick being operated by a hoisting engine, but the booms are swung by hand by means of guy ropes. The masts and booms are sticks 14x14 inches, the masts being sixty-five feet long and the booms sixty-two feet long. The derricks have a lift of fifty-seven feet, a working radius of 118 feet and a hoisting capacity of ten tons.

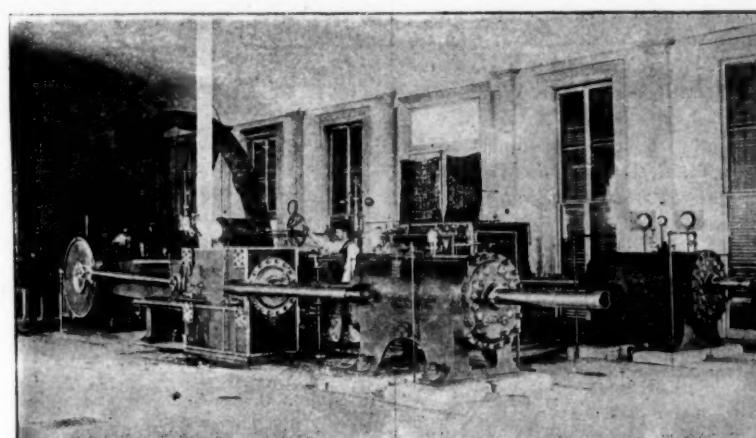
Important Steam-Power Improvement.

The improvements invented by James D. Gray for developing steam power and economizing it were recently tested at the Columbian Iron Works, Baltimore, in the presence of President Malster, of the iron works, and several other steam-power experts. Mr. Gray's inventions were referred to at length in the Manufacturers' Record some time ago, when a company was formed to control the patents secured for them. An ordinary engine of about twenty horse-power was fitted with his compound governor valve and friction clutch. Steam was turned on and the engine operated at various degrees of speed. Its work was pronounced by the experts to be highly satisfactory. It was calculated that fully 40 per cent. more horse-power was developed than in the ordinary mode of working an engine and a considerable saving effected in fuel consumption.

The inventions of Mr. Gray are controlled by a company, of which William T. Malster is president; H. H. Hobelmann, vice-president; William B. Price, secretary; H. Knollenberg, treasurer; James D. Gray, superintendent, and Abraham Sharp, attorney.

The wagon factory at Florence, Ala., was burned on the 7th inst. The large stock building and entire contents, about 700 wagons, was completely destroyed. A careful estimate of the total destruction places the loss at \$27,000, with \$5000 insurance. The owners of the factory will repair the loss and put on a larger force, in order to fill orders on file. The factory is now in operation.

From a personal letter to the editor we take the following extract: "I hear the New York Herald has, in its discussions of armor-plates, been attacking the basic process, the tenor of the attacks being seemingly inspired by the acid process men. German, French and English scientists have gone over the whole field during the past ten years, and have decided in favor of the basic process. The basic process is the only hope of steelmakers at Birmingham, Ala."



COMPRESSED-AIR PLANT AT JEROME PARK RESERVOIR.

sented in the aggregate a large amount, that would be difficult to name, that is saved by the Jerome Park plant. For instance, a cheaper grade of hose can be used with air, and will outwear several lengths of steam hose. As a matter of fact, quarrymen using compressed air find that the saving in hose alone equals the expense of keeping up the plant.

Less oil is required with air than steam. A little oil will last for hours in an air cylinder, and will ease the working of the machine. Steam burns the oil out in a few minutes.

It is evident that greater economy will be realized by the use of one central plant placed where fuel and water are most accessible, removed from all danger from blasts, falling derricks, etc., not subject to constant removal, provided with an economical boiler plant, a compressing engine of high efficiency, fitted with an entirely automatic system of governing devices, using steam expansively, and requiring steam only in exact proportion to the amount of air being used. This disposes of all annoyance and expense incidental to supplying coal and water to a number of different boilers, and there is only one fireman, and one boiler plant to keep in repair. All annoyance and expense from frozen pipes in cold weather, smoke, exhaust steam and ashes in the quarry are avoided.

The Jerome Park reservoir, where this compressed-air plant has been installed,

is stalled and put in operation, having been started on May 14. For a power-house, one of the large buildings of the club at the old Jerome Park racetrack is used, the building having been removed bodily to a convenient situation. In this are installed a cross-compound Corliss engine of 600 horse-power, with a compressing cylinder behind each of the steam cylinders. The engine drives a flywheel twenty-five feet diameter, weighing 50,000 pounds, mounted on a shaft fourteen inches diameter, the shaft having an eccentric keyed on each side of the wheel and being driven by means of a crank disk at each end. The main shaft bearings are 14x26 inches. The steam cylinders are 24x48 inches and 44x48 inches, while the air cylinders are 24 $\frac{1}{4}$ x48 inches. The cylinders are six feet apart, longitudinally, and fourteen feet e. to e. transversely. The walls of the air cylinders are cooled by water jackets. The compressor is of the company's standard design, which is probably familiar to most of our readers.

From the receiver an eight-inch pipe extends for a distance of 1500 feet, and is followed by two main lines of four-inch pipe, from which again run two-inch pipes aggregating about 2000 feet in length. The branch pipes to the machines are one and one-half inches diameter, this being the smallest size used. The aggregate length of the piping system is now about 6300 feet. Another

PHOSPHATES.

Phosphate Markets.

Office Manufacturers' Record,
Baltimore, Md., January 14.

In the phosphate market the volume of business is about the same as the previous week, and the demand at the moment is moderate. It is expected, however, that later on there will be a better business reported. Advices from mining sections are unchanged, and from South Carolina the reports are more encouraging. There is a better foreign demand for rock, and since the 1st inst. nearly 10,000 tons have been shipped from Beaufort and Port Royal. Prices are nominally steady at \$3 for rock at the mines, hot-air-dried \$3.25 Ashley river and \$3.45 Charleston city. From Florida there is a moderate degree of development in mining sections, and shipments are expected to improve in the next sixty days. During the past year the shipments of Florida rock from the ports by railroad and consumption in the State amounted to 547,869 tons, against 536,377 tons for 1895. In Tennessee there is very little doing at present except at Mount Pleasant, most of the mines suspending operations during the inclement weather. The arrivals of phosphate rock in the local market are light, and rates of freight are not materially changed. There are no local charters reported. In New York business in phosphate freights is slow, and steamers are scarce, owing to heavy shipments of cotton and grain. Among the charters reported last week were the following: A British steamer, 1200 tons, from Tampa to Ghent, four trips, with phosphate at 16/6, February-March, April-May, July-August and November-December; the British steamer Atlantic, 2001 tons, from Fernandina to Harburg with phosphate, time charter, on private terms, and the schooner Hattie E. King, 273 tons, from Barren Island to Belfast with fertilizer on private terms.

Fertilizer Ingredients.

There has been a moderate volume of business during the week, and the general market holds steady, with a fairly active demand. Blood and tankage are firm, with sales of 400 tons of the latter at \$1.65 and 10, Baltimore freight. There is considerable inquiry from Southern sources. In the West values are firm, with light offerings and stocks ample for the demand. Sulphate of ammonia is firm, with a fair demand. Nitrate of soda is dull and firm at previous figures.

The following table represents the prices current at this date:

Sulphate of ammonia (gas)...	\$2 25	@	—
Nitrate of soda.....	2 00	@	—
Blood.....	—	@	1 80
Hoof meal.....	1 65	@	1 70
Azotine (beef).....	1 67 1/2	@	1 70
Azotine (pork).....	1 67 1/2	@	1 70
Tankage (concentrated).....	1 65	@	1 70
Tankage (9 and 20).....	1 65	and	10
Tankage (7 and 30).....	15 00	@	16 00
Fish (dry).....	20 00	@	—
Fish (acid).....	11 00	@	12 00

Phosphate and Fertilizer Notes.

The sale of the plant of the Carolina Sulphuric Manufacturing Co., of Blacksburg, S. C., is ordered, and will take place on February 23 and 25.

The British steamship Lady Armstrong cleared from Savannah, Ga., for Bremen last week with 1738 tons of Florida phosphate rock, valued at \$17,380, and other cargo.

It is stated that the fertilizer companies at Wilmington, N. C., shipped during 1896 over 70,000 tons of material, and all indications point to shipments equally heavy during the current year.

Messrs. C. H. Dempwolf & Co., manufacturers of fertilizer machinery at

York, Pa., have issued their annual calendar for 1897, executed in a most attractive style of the printer's art.

The laborers at the various phosphate mills at the "Neck," near Charleston, S. C., have all returned to work at the advanced rate of \$1 per day. Most of the mills are working as usual, and shipping their goods with a rush.

The following vessels cleared last week from Beaufort, S. C., for Liverpool having phosphate rock among their cargoes: Steamships Inchisla 1900 tons, the Hilleray 2500 tons and the Werneth Hall with 2400 tons—total 6800 tons.

A meeting of the board of directors of the Americus Guano Co., of Americus, Ga., was held last week. After reviewing the successful business of the past year a dividend of 10 per cent. was declared on the capital stock of \$100,000. The company also has a surplus fund of \$100,000.

The fertilizer manufacturers at Savannah began shipping heavily last week. Recent sales have been large, and indications are that this will be a good year for the industry. The State railroad commission, at its session at Atlanta on the 7th inst., ordered the railroads to reduce their rates on fertilizers 20 per cent. The order is to date from the 1st inst. The period of shipments of fertilizers extends, as a rule, through January, February and March.

The following coastwise shipments of phosphate rock from the port of Charleston, S. C., were reported for the week ending the 8th inst.: For Wilmington, N. C., schooners Robert A. Snow with 168 tons and Adelia J. Carleton with 550 tons; brig H. B. Hussey for Weymouth, Mass., with 850 tons; schooner Bertha F. Walker for Baltimore with 1050 tons, and Annie C. Grace for Philadelphia with 725 tons of pyrite cinders. The total exports of phosphate rock from Charleston to domestic ports since September 1, 1896, amount to 34,692 tons, against 36,967 tons for the corresponding period last year.

Messrs. J. M. Lang & Co., of Savannah, Ga., report the following shipments of Florida phosphate rock from that port for the month of December, 1896: Steamships White Jacket for Kastrup with 3085 tons, and Kingswood for St. Louis du Rhone with 1100 tons, both by Anglo-Continental Guano Works; steamship Planet Mercury for Bremen with 1911 tons, by C. E. Albson; steamship Arabian Prince for Antwerp with 1646 tons, by H. A. Ford; steamship Vera for Bremen with 1600 tons, by J. M. Lang & Co. and C. E. Albson; steamships Sidra for Bremen with 1495 tons, Planet Venus for Hamburg with 2496 tons and Strathnairn for Bremen with 478 tons, all by A. Newman; total for the month, 13,784 tons.

In the phosphate belt of Florida during the year 1896 the work of development was not of a vigorous character, and the low prices ruling restricted in a great measure the general output, while those engaged in mining limited the production to supply actual wants. Land-rock miners took but few new orders during the year, and shipments were generally made to fill old contracts. In the pebble districts mining was pursued more steadily, and considerable money has been spent in order to supply the various plants with all modern appliances for economizing and facilities for placing their product upon the market as cheaply as possible. The shipments and movement of Florida rock from the various ports for 1896 are given as follows: Fernandina 129,368 tons, Port Tampa 161,258 tons, Punta Gorda 74,641 tons, Sa-

vannah, Ga., 97,040 tons, Brunswick, Ga., 40,562 tons, railroads 30,000 tons, consumed in the State 15,000 tons, making a total of 547,869 tons, against 536,377 tons for the year 1895.

COMPARATIVE SHIPMENTS.

	1895.	1896.
Port. For'n. Domes.	139,714	13,132
Fernan'a ..	127,918	11,450
Pt. Tampa.	119,868	48,574
P. Gorda..	62,211	5,066
Savannah..	80,427	97,040
*Brunsw'k..	23,484	40,562
Railroads.	30,000
*Consum'd.	15,000
Total....	425,705	110,672
Estimated.		400,288
		147,581

*Estimated.

The State board of phosphate commissioners met in Columbia, S. C., on the 4th inst. to consider the report of Phosphate Inspector A. W. Jones and the petition of the river-rock miners for a reduction of the royalty to twenty-five cents, with an ascending scale, if prices get better. The board considered the petition for a reducteion of royalties, and referred all the papers to the general assembly without recommendation. Mr. Jones, in his report of operations from September 1, 1895, to August 31, 1896, gives the following-named companies and individuals as engaged in mining and shipping rock during the year:

Coosaw Company, Farmers' Mining Co., Beaufort Phosphate Co., W. Y. Tripp, James Reid, the Carolina Mining Co. and John C. Nelson. The total amount of rock mined during the year ending August 31, 1896, is estimated at 123,708 tons, as against 196,777 tons for the year ending August 31, 1895, showing a decrease of 73,069, and, as compared with the year 1893, a decrease of 96,767 tons. The total number of tons of rock shipped during the year ending August 31, 1896, was 121,602 1/2 tons, being a decrease from that of the year 1895 of 52,797 1/2 tons. The total amount of rock on hand August 31, 1896, was 37,963 tons. The amount of State's royalty for the year ending August 31, 1896, was \$60,853.76, and for 1895 it amounted to \$87,200.13, showing a decrease from last phosphate year of \$26,346.37. Of the rock shipped or sent to market, 93,527 tons were foreign, 11,257 tons coastwise, 5017 1/2 tons taken at Charleston, 11,801 tons at Beaufort or Port Royal, making a total shipment of 121,602 1/2 tons. Mr. Jones also appended a report of shipments by the different companies from January 1, 1895, to January 1, 1896, which is as follows: Coosaw Company, 58,439 tons; Farmers' Mining Co., 43,998 tons; Beaufort Phosphate Co., 26,987 tons; Carolina Mining Co., 34,667 tons; W. Y. Tripp, 388.75 tons—making a total of 164,479.75 tons.

Thirty-six prominent lumber manufacturers met at Red Springs, N. C., on the 1st and organized "The Central Carolina Yellow Pine Lumber Protection Association." The combined output of the mills represented an amount of between 50,000,000 and 60,000,000 feet per annum. The association was formed for the protection of manufacturers from fraudulent and dishonest dealers, and to confer with railroads in regard to freight, etc. W. T. Williams, of the Red Springs Railway & Lumber Co., was elected president, and G. H. Hall, of the R. T. De Vane Lumber Co., secretary and treasurer. The meeting adjourned to meet in Fayetteville, N. C., the first Wednesday in each month.

Tours to Florida.

No district in America presents during the winter season so many varied attractions as the State of Florida. Besides its delightful climate, which to one escaping from the cold and unhealthful changes of the North seems almost

real, it is pre-eminently a land of sport and pleasure. Along its 1100 miles of salt-water coast and in its 1200 freshwater lakes are fish of almost every conceivable variety, from the migratory tribes common to Northern waters to the tarpon, pompano and others of a more tropical character. Nowhere in all our broad land can the angler find a greater variety of game or better sport.

Here also the most enthusiastic hunter finds satiety. Deer, turkeys, bears, panthers and wild cats roam at large through the more sparsely settled regions, while birds of all kinds may be found in abundance throughout the State. The more novel sport of alligator and manatee hunting may also be indulged in by the more adventurous tourist.

With its matchless climate, its orange groves, its rivers and lakes, its boating and bathing, its fishing and hunting, and its extensive forests, Florida presents unrivaled attractions for the valetudinarian, the lover of nature, the sportsman and the explorer.

To this attractive State the Pennsylvania Railroad Co. has arranged four personally-conducted tours during the season of 1897, leaving by special train January 26, February 9 and 23, and March 9. The first three tours will admit of a sojourn of two weeks in this delightful land; tickets for the fourth tour will be valid to return until May 31 by regular trains.

Rates for the round trip, \$50 from New York, \$48 from Philadelphia, and proportionate rates from other points.

For tickets, itineraries and other information, apply to ticket agents, special booking offices, or address Geo. W. Boyd, assistant general passenger agent, Broad Street Station, Philadelphia.

CALIFORNIA.

Personally Conducted Tour via Pennsylvania Railroad.

At 8.13 A. M., Wednesday, January 27, a special train of Pullman composite, dining, sleeping, compartment and observation cars will leave the handsome Jersey City depot of the Pennsylvania Railroad, bound for San Diego, California, and conveying the first of the Pennsylvania Railroad Co.'s personally-conducted tours to the Pacific coast.

This train will be the finest that ever crossed the continent, and the tour it carries one of the most elaborate and complete ever conceived for transcontinental and pleasure travel. In charge of an affable and experienced tourist agent, assisted by a highly-accomplished chaperon, this party, without fear of missing train connections, and without any of those petty annoyances incident to individual traveling, crosses the American continent with as much comfort and ease as it would spend a week at the Waldorf, stopping, too, at St. Louis, Kansas City, Las Vegas Hot Springs and Santa Fe, and visiting their principal points of interest. A bathroom, barber shop and an upright piano will be found on the train, and every other convenience and luxury of a first-class hotel.

The great object of this tour is to escape the insalubrious climate of the East and to sojourn for a time amid the transcendental beauties of California, breathe its invigorating air and bask beneath its matchless sky. A grander attraction could not be offered, nor a more perfect method of reaching it.

Five weeks will be allowed in this "Paradise of the Pacific," during which tourists will visit Los Angeles, Pasadena, "Ye Alpine Tavern," Santa Barbara, San Bernardino, Mt. Hamilton, and the garden spot of the earth, Del Monte.

Returning, tourists will stop at Salt Lake City, Glenwood Springs, Colorado Springs, Manitou, Denver and Chicago. Two days will be spent visiting the famous and sublime freaks of nature in the Manitou region.

Tickets for this tour, including railroad transportation, Pullman accommodations (one double berth), meals en route, carriage drives, and hotel accommodations going and returning, and transportation in California, will be sold at rate of \$310 from all stations on the Pennsylvania Railroad system east of Pittsburg.

Apply to ticket agents, tourist agent at 1196 Broadway, New York, or Geo. W. Boyd, assistant general passenger agent, Broad Street Station, Philadelphia.

Modern Marine Machinery.

Complete outfitts in either single or twin screw, side or stern paddle wheel machinery, built by Marine Iron Works, No. 9 Dominick street, Chicago. Catalog free.

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD

The Manufacturers' Record seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in any town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and even then they must expect the return of some letters, because of the lack of knowledge on the part of postmasters of all new companies. Criticisms and complaints are invited, as they will the better enable us to guard against errors.

Mr. H. L. Merritt, of Blenheim, Ontario, intends to establish a spoke and handle factory in the Southern States, and is now prepared to correspond with makers of machinery.

ALABAMA.

Birmingham—Rolling Mill.—The Birmingham Rolling Mills will shortly resume operations, employing 1200 men.

Birmingham—Bridge.—The Southern Railway Co. will at once erect an iron bridge, to cost \$8000, over the Cahaba river near Birmingham. W. H. Hudson, chief engineer of the company, can be addressed at Atlanta, Ga.

Birmingham—Canal.—J. A. Van Hoose is promoting a movement for inducing the national government to construct a canal from Birmingham to the Warrior river, thus affording an outlet to the Gulf. Major W. T. Russell, government engineer at Mobile, Ala., recommends an appropriation of \$15,000 to make a complete survey and determine the feasibility of the project.

Demopolis—Electric-light Plant.—The city council has granted a franchise for the erection of an electric-light plant to the Demopolis Electric Light & Power Co.

Florence—Woodworking Factory.—Wm. D. Berry (address care of Winch Bros.) is forming a \$2500 company to establish a bent-wood works.

Florence—Cotton Mills.—It is not true, as had been rumored, that the Cherry Cotton Mills will erect a plant for working its product into cloth.

Florence—Wagon Works.—J. Fred. Fisher is meeting with success in forming the proposed new buggy company. Option has been secured on a building to be used for factory.

Greenville—Cotton Mill.—The Wellesley Mills has been incorporated by J. H. Dunklin, R. A. Beeland, H. L. Brown and R. Y. Porter for the establishment of a cotton mill. The capital stock is \$25,000.

Montgomery—Publishing.—A morning newspaper will be established by E. J. Wiley and associates.

Prichard—Woodworking Factory.—The Van Dyke Manufacturing Co. will rebuild at Prichard its large fruit-package factory which was recently burned at Sunnyside.

Sheffield—Electric-light and Water-works Plant.—J. A. May, president of the Colbert County Bank, of Tecumseh, and C. B. Ashe, of Sheffield, have leased the water and light plants of the Electric Light & Water Co., and will thoroughly repair same, incidental to their early operation.

ARKANSAS.

Arkansas—Bridge.—The Texarkana & Fort Smith Railway will construct a bridge over the Red river near Fulton; W. A. Williams, general manager, Texarkana, Texas.

Bucksport—Lumber Company.—Chester A. Albright, of Philadelphia, Pa.; Robert Laird and Wm. H. Kessler, of Bucksport, have incorporated the Waccamaw Lumber Co., with a capital stock of \$25,000.

Little Rock—Brick Works.—Apperson & Leiper are arranging for the erection of brick works with a capacity of 40,000 daily and to cost \$20,000.

Luxora—The Luxora Opera House Co., capital stock \$6000, has been incorporated by John R. Driver and others.

Texarkana—Lumber Mills.—The Big Woods Lumber Co. has reorganized and elected George W. Fouke, president; Hugh Corey, secretary, and Joe Fuqua, treasurer. The mill will be overhauled and improved preparatory to resuming operations. Nine miles of railroad will be constructed to timber forests.

FLORIDA.

De Funak Springs—Telephone Lines.—Stock has been subscribed for the construction of telephone line to Whitfield, a distance of twenty-five miles, with probable extensions to Freeport, six miles farther. R. W. Storrs can be addressed for information.*

Fernandina—Electric-light Plant.—The city is considering the advisability of erecting a new electric-light plant. Address the mayor.

Newberry—Phosphate Mines.—The Newberry Phosphate Co. has been incorporated, with a capital stock of \$25,000, to mine and manufacture phosphate, etc.; H. L. Anderson, president; Herbert A. Ford, secretary-treasurer, and Edward Hiller, general manager.

Swannee Shoals—Saw Mill, etc.—H. and M. S. Knight are erecting a saw mill, and expect also to put in cotton gins and grist mill.

GEORGIA.

Atlanta—Medicine Factory.—A new company has been organized, with A. J. Hutchinson, president; Custer Berkeley, secretary; Hon. Hoke Smith, Albert Howell, John Clark, J. C. Holloman and E. Berkeley, directors, for the purpose of removing a medicine factory from Greensboro, N. C., to Atlanta, and to push extensively the manufacture of "Africana."

Atlanta—Water Extensions, etc.—The city council will be asked to appropriate \$100,000 for buying new water pipe and \$12,000 for laying new pipe. Address the mayor.

Augusta—Electrical Works.—The Moore-Edenfield Electric & Manufacturing Co. will apply for charter and continue the business of Moore & Edenfield, manufacturing dynamos, motors and supplies; George P. Welch, treasurer, and R. J. Edenfield, general manager.

Augusta—Steel Bridges.—The Charleston, Western Carolina Railway Co. informs us that contract has been let to the Edgemere Bridge Works, of Wilmington, Del., for the construction of the five steel bridges heretofore mentioned.

Augusta—Water Works.—The city is considering the establishment of a new system of water works. Address the mayor.

Barnesville—Cotton and Woolen Mill.—Thomas J. Simmons, A. O. Murphey, J. J. Rogers, Edward Elder, J. P. Thurman and J. L. Kennedy have incorporated the Georgia Underwear Co. for the manufacture of all kinds of knit goods, cloths, hosiery, etc. The capital stock is to be not less than \$8000 nor more than \$100,000.

Columbus—Cotton Compress.—The W. C. Bradley Co., noted last week as incorporated, is preparing to arrange for the erection of a compress. Bids are being asked.*

Douglas—Improvements.—B. Peterson, E. A. Buck, W. F. Libbitt, F. Willis Dart and

others have incorporated the Douglas Improvement Co., with a capital stock of \$10,000, for the purpose of erecting school and other public buildings.

Gainesville—Electric-power Plant, etc.—C. C. Sanders, James W. Bailey, Z. T. Castleberry, George W. Walker and Samuel C. Dunlap have incorporated the Gainesville & Chattahoochee Power & Manufacturing Co. for the purpose of developing and utilizing the water-power of the Chattahoochee river in Hall county; also to erect electric-power plant, with all necessary machinery for generating electricity by water or otherwise; to erect and operate a system of electric lights for public and private use. The capital stock of said corporation is \$50,000.

Marietta—Machine Shops.—The Atlanta, Knoxville & Northern Railway Co. has made a proposition to the Board of Trade for the erection of machine shops at Elizabeth at a cost of \$15,000, provided they receive sufficient inducements from the citizens. R. W. Boone, vice-president Board of Trade, can be addressed at Marietta.

Savannah—Electric-light Plant.—Charles P. Graham has contracted with the Savannah Electric Light & Supply Co. for an electric-light plant for the Tybee Hotel. This plant will consist of two dynamos, each of which will have 250-light capacity.

Savannah—Power-house, etc.—Herman Myers, acting for the majority bondholders, has purchased for \$211,000 the Savannah Electric Railway. The new purchasers will improve the property at a cost of between \$75,000 and \$100,000, among the improvements being the erection of a new power-house at a cost of \$50,000, which will be equipped with the latest modern machinery. The track will be relaid and new rolling stock added.

Savannah—Telephone System.—The Southern Telephone & Telegraph Co. will ask the city council for franchise to construct telephone system in Savannah.

Villa Rica—Gold Mines.—The Golden City Mining & Milling Co., recently reported as incorporated, has a good property and intends to operate extensively, so we are informed.*

KENTUCKY.

Lawrenceburg—Water Works and Electric-light Plant.—The construction of a system of water works and the erection of an electric-light plant is talked of. Address W. H. McBrayer.

Louisville—Pottery.—The Mansion Pottery Co., operating a pottery, has been incorporated by E. C. Webster, John Saut and Maria J. Saut for the continuance of said business. The capital stock is \$10,000. Address 1208 Fulton street.

Madisonville—Water Works.—Steps are being taken by the city council relative to the organization of a stock company for the construction of the proposed system of water works. Address the mayor.

Paducah—Water Works.—Councilman Barnes has presented an ordinance to the city council for a franchise for the construction of a system of water works, the intention being to develop artesian wells. Address the mayor.

LOUISIANA.

Amite City—Bridge.—A committee has been appointed to confer with Mickle & Hager, steel bridge contractors, relative to the construction of a bridge across the Tangipahoa river. Address the mayor.

New Orleans—Power-house.—The New Orleans Traction Co. has made negotiations with the General Electric Co. for the establishment of its own power-house. The company will acquire about one-half of the existing Louisiana electric-light plant, together with the entire railroad machinery, and will also put in a 1000 horse-power engine and one General Electric 1500-kilowatt generator, etc.; the entire improvements to cost about \$100,000.

Shreveport—Lumber Company.—The Southern Lumber Co., Limited, has been incorporated, with E. E. Finney, president; W. C. Connelly, vice-president, and J. H. Thatcher, secretary-treasurer. The capital stock is \$10,000.

St. Mary's Parish—Charles D. Sweet, of the Curtis & Wamsley Co., of New Orleans, is in receipt of information that discoveries of salt and sulphur deposits have recently been made in St. Mary's parish. Further information will be given shortly.

MARYLAND.

Baltimore—Glass Works.—The Baltimore Glass Co., whose works at Westport have been closed for repairs, have resumed operations with a greatly increased capacity and employing about 200 operatives.

Baltimore—Publishing Company.—The National Junior Publishing Co. has been incorporated by J. Adam Sohl, William L. James, Henry B. Geddes and others, with a capital stock of \$1000.

Baltimore—Whiskey Distillery.—The J. B. Brown Co., reported last week as incorporated, has elected for president, Gustav T. Dalcour, and J. Burklow Brown, secretary-treasurer. The company will engage in distilling, blending and rectifying Maryland whiskeys at 231 South street. Capital stock is placed at \$30,000.

Baltimore—Broom and Brush Factory.—Robert C. Norman, William B. Graves, Henry W. Graves, John Norman and others have incorporated the Norman Broom & Brush Co., of Baltimore county, for the purpose of manufacturing brushes and brooms. The capital stock is \$10,000.

Baltimore—Radiator Foundry.—Timothy Holland, of Bremen, Ind., is in Baltimore making arrangements for the establishment of a foundry for the manufacture of his patent hot-water radiators, the site for which is said to have already been selected. This establishment will employ from the start at least 400 operatives. Among the Baltimoreans said to be interested are Walter B. Brooks, of the Canton Land Co.; Percy McLaren, Arthur Ebberman and D. Eldridge Monroe.

Baltimore—Brass and Metal Works.—The Curtis Bay Brass and Metal Works will double the capacity of its present plant and make other extensive improvements, including the erection of an additional building constructed of corrugated iron, 40x100 feet, and two stories high. In addition to this, a new iron foundry is to be built, with a capacity of from 5000 to 6000 pounds of light casters per day. This building will be 40x44 feet; the entire improvements to cost about \$10,000. Charles B. Roberts, Jr., is president of the company.

Baltimore—Telephone Factory.—Benjamin Butterworth, of Cincinnati, Ohio; J. E. Blair, of Gettysburg, Pa.; A. G. Davis, of Baltimore; H. D. Walbridge, of Washington, D. C., and others have incorporated the Drawbaugh Telephone & Electrical Appliance Co., Limited, of Washington, D. C. This company purposes to manufacture telephones and appliances patented by Daniel Drawbaugh, of Pittsburg, Pa., and has contracted with the Vladuct Manufacturing Co., of Baltimore, for the manufacture of the instruments. Later on the company may establish its own factory in Baltimore. The company's main office is in the Ohio National Bank Building, Washington, D. C.

Bloomington—Coal Lands.—Horace Resley, of Cumberland, has purchased 1000 acres of coal lands from William H. Barnard and others. Arrangements are being made for the development of the property.

Chestertown—Oil Tank.—The Standard Oil Co. is erecting a 28,000-gallon oil tank at Chestertown.

Cumberland—Bridge.—Bids have been asked for and contract will be shortly let for the construction of a new bridge over Evitts creek near Cumberland; the new structure to be of two spans of fifty-five feet each. Address county commissioners.

Cumberland—Land Improvement.—Martin Van Buren Stacey, of Seattle, Wash., representing a syndicate of New York, Missouri and Chicago capitalists, is reported as having purchased 200 acres of land in the suburbs of Cumberland for \$120,000, for the purpose of improving same by the establishment of a new town. Col. Richard D. Johnson, of Cumberland, can be addressed.

Oakland—Coal Mines.—John Scally has reopened the Offutt coal mines.

Rockville—Ice Plant.—It is reported that a company is forming to build an ice plant.

MISSISSIPPI.

Vicksburg—Furniture Factory.—The projected furniture factory will soon be built. A company to operate the plant will be organized, with R. L. Crook, president.

Walker's Bridge—Saw Mill, Cotton Gin, etc.—S. A. Simmons will rebuild his saw mill, cotton gin and grist mill.*

Yazoo City—Carriage Works, etc.—The Harlos Carriage & Machine Co. has been incorporated, with capital stock of \$15,000.

[Jan. 15, 1897.]

MISSOURI.

De Soto—Creamery.—The De Soto Creamery Co. has been incorporated by George R. Rathburn, G. W. Byrd, E. E. Curtis and others. The capital stock is \$3500.

Joplin—Zinc Works.—The Empire Zinc Co. has put new machinery in its works for the manufacture of retorts.

Kansas City—Shoe Company.—H. H. Daniels, G. D. Saunders, L. H. Byrns and others have incorporated the Link Shoe Co., with a capital stock of \$10,000.

St. Louis—Publishing Company.—The Union Publishing Co. has been incorporated by W. A. Irwin and others, with a capital stock of \$2000, for the purpose of carrying on a general printing business.

St. Louis—Smelting Works.—The Missouri Smelting Co. has reorganized, with an increased capital stock of \$100,000, among the new directors being James Green, J. B. M. Kehlor, G. A. Madill, Webb M. Samuel and others.

St. Louis.—The Thomas Warren Co. has been incorporated, with a capital stock of \$30,000, by Thomas Warren, Elmer J. Wright and E. S. Casholm.

St. Louis—Telephone Plant.—Hopkins J. Hanford, general manager of the Kinlock Telephone Co., recently organized, with a capital stock of \$1,500,000, is supervising the drawing of plans for the new telephone plant to be erected by this company.

Westport—Water Works.—The city will soon arrange for the construction of water works to cost about \$75,000. Bonds were issued to secure the funds. Address the mayor.

NORTH CAROLINA.

Graham—Cotton Mill.—The Oneida Cotton Mills has completed its additional building and placed 401 looms in it. Later on may increase to 1000 looms.

Monroe—Water Works.—W. S. Lee, R. A. Morrow, E. E. Britton, H. B. Adams and S. W. Parham have been appointed a committee to petition the legislature for authority to issue \$40,000 of bonds for the construction of water works by the city. Address the mayor.

Moore County—Gold Mine.—A company is being organized with a view to development on a large scale of the Cagle gold mine. For information in regard to machinery or other matters, address R. E. Lyon, 849 Equitable Building, Baltimore, Md.

Raleigh—Electric-light Plant.—The city contemplates the erection of an electric-light plant for the purpose of lighting the streets. A company has been appointed to investigate, with John C. Drewrey as chairman.*

Salem—Chair Factory.—E. A. Ebert is about to establish a chair factory.*

Sparta—Buggy Factory.—The Sparta Buggy Co. has been formed and will establish a factory.*

Wadesboro—Stone Quarry.—C. St. C. Kirk, of Charleston, S. C. (39 Broad street), is organizing a company to develop a brown-stone quarry near Wadesboro.*

Winston—Chair Factory.—Weisner & Holland have established a chair factory.

SOUTH CAROLINA.

Abbeville—Water Works.—Contracts have been awarded for the construction of the water works previously announced—contract for the piping to the Chattanooga (Tenn.) Pipe Co., at \$11,213.90; for the standpipe to Charles Rosser, Bellaire, Ohio, at \$3450; for the pumps and boilers to Chas. Rosser, at \$1763; for the valves and hydrants to the Rennsaler Manufacturing Co., Troy, N. Y., at \$1575.31; for the trenching and pipe laying to Pennyman & Kelly, Asheville, N. C., at \$3158.59.

Anderson—Water-power Development.—The Portman Shoals Water Power Co. has the contractors at work on its big plant, and expects to complete same by June 1. The development will produce about 5000 horse-power, and will be transmitted for consumption by electricity. Watkins & Hardaway, of Birmingham, Ala., have the contract for dam and power-house.

Charleston—Knitting Mills.—The Charleston Knitting Mills will put in \$3000 worth of machinery, thus doubling its capacity.

Charleston—Power-house.—The Charleston Street Railway Co. will shortly commence the erection of its power-house.

Charleston—Manufacturing.—The Phillips & Meyers Manufacturing Co. has been incorporated, with Lee Loeb as president; W. B. Cohen, secretary, and Isaac Cohen, treasurer.

Georgetown—Rice Company.—Charter granted to the Guendelos Rice Co., with St. J. M. Lachicotte, president, and Marks Moses, treasurer.

Rock Hill—Cotton Mill.—Thos. L. Johnson writes regarding the proposed cotton mill that the project has been abandoned for the present, but may bear fruit later on.

TENNESSEE.

Chattanooga—Jelly Factory, etc.—J. Laukota, of Ohio, has established a factory in Chattanooga for the manufacture of jellies, macaroni and grocers' supplies.

Chattanooga—Distillery.—E. R. Betterton, of Chattanooga, and Messrs. Tolley, of West Tennessee, will soon commence the erection of the distillery previously noted. The plant will have a daily capacity of 100 bushels, and will cost about \$6000.

Chattanooga—Medicine Factory.—The Victor Medicine Co. has been chartered, and H. S. Thatcher is president and manager; D. J. Duffy, secretary-treasurer; capital stock \$15,000; purpose, to manufacture a patent medicine.

Chattanooga—Cotton Mill.—There is some talk of a cotton mill being added to the Garrett Andrews Knitting Mill. E. G. Richmond is interested.

Chattanooga—Roofing Works.—The Chattanooga Steel Roofing Co. is preparing to erect its addition, to cost about \$4000.

Knoxville—Planing Mill.—T. M. Michaels is increasing the capacity of his sash and blind factory.

Tennessee—Phosphate Lands.—We are informed that there is absolutely no truth in the recent report, to which reference was made in this department, that P. D. Armour, of Chicago, and associates had bought phosphate lands in Tennessee.

TEXAS.

Alvin—Fruit Company.—The Gulfboard Fruit Co. has been incorporated, with H. G. Reed, president; A. H. H. Tolar, vice-president; Henry Sampson, treasurer, and W. H. Reed, secretary, for the purpose of handling fruit and vegetable crops.

Bryan—Electric-light Plant.—The city council is conferring with the Bryan Water, Ice & Light Co. for the change of its system from incandescent to arc lighting for city supply.

Corsicana—Woodenware Plant.—The Richmond Cedar Works, of Richmond, Va., writes that there is no truth in the report that it will build branch at Corsicana.

Crockett—Tram and Lumber Company.—The Crockett Tram & Lumber Co. has been incorporated, with a capital stock of \$100,000, by W. C. Jeter, John B. Smith, A. A. Aldrich, A. H. Wothers and D. A. Nunn, for manufacturing lumber, etc.

Gainesville—Cigar Company.—The Gainesville Cigar Co. has been incorporated, with a capital stock of \$10,000.

Gainesville—Cigar Factory.—J. F. Morris, J. H. Wilson and George Hoag have incorporated the Gainesville Cigar Co., with a capital stock of \$10,000, for the manufacture of cigars and tobacco.

Hempstead—Electric-light Plant.—The proposed electric-light plant, heretofore noted, will doubtless be erected in the near future. Amsler Bros. can be addressed for particulars.

Karnes City—Steel Bridges.—The commissioners' court has rescinded the contract recently awarded for the construction of two steel bridges. New bids will doubtless be asked.

Llano—Traffic Company.—The Northwestern Traffic Co. has been incorporated by F. H. Holloway, S. D. Rainier, C. R. Wood and R. E. Johnson, with a capital stock of \$20,000.

Runge—Water Works.—Efforts are being made for the organization of a stock company to establish a system of water works. Address the mayor.

Sabine Pass—Wharf.—Kountze Bros. will, it is stated, build a wharf 700 feet long and 180 feet wide.

Sabine Pass—Wharves.—Messrs. Kountze Bros. (bankers, of New York city and Sabine Pass,) will build wharves 700 feet long 175 feet deep. (See Building Notes.)

San Antonio—Mercantile.—Geo. F. Dullning and others have incorporated the Dulling Grocery Co., with a capital stock of \$50,000.

Sherman—Water Supply.—G. M. Etter and associates will thoroughly develop flowing wells for water supply, etc.

Tyler—Woodworking Factory.—The Tyler Coffin Co. has been incorporated, with capital stock of \$50,000, to manufacture caskets, etc.; Charles T. Benner, H. M. Whitaker and W. G. Human, incorporators.

VIRGINIA.

Alexandria—Land Improvement, etc.—The Capital Construction Co. has been incorpo-

rated, with a capital stock of \$100,000, for the purpose of purchasing and improving real estate, etc. W. E. Saunders is president of the company; P. McK. McBalduin, secretary, and W. H. Saunders, treasurer.

Bristol—Furnace.—The sale of the Bristol furnace to the Home Iron Co. at \$55,000 has been confirmed, but will probably be taken to a higher court. The property is said to be worth \$400,000.

Danville—Tobacco Factory.—The American Tobacco Co. (main office, New York city,) will rebuild its burned tobacco factory.

Danville—Clock-works Factory.—Dwight B. Hill, of Plainville, Conn., is in correspondence with M. V. Richards, industrial agent of the Southern Railway, relative to the removal of his clock-works manufactory to Danville. Mr. Hill proposes to contribute \$75,000 to the capital stock of a company to establish these works, provided local capitalists will contribute from \$50,000 to \$75,000.

Edenburg—Brick Plant.—The Edenburg Mining & Manufacturing Co. is about to commence work on its big brick plant previously announced.

Elkton—Bridge.—Contract has been let to the West Virginia Bridge Co. for the construction of an iron bridge across the Shenandoah river in Rockingham county. Address the county commissioners.

Fredericksburg—Granite Works.—Swift & York will rebuild their polishing works reported as burned.

Martinsville—Mercantile Company.—D. H. Morris and W. S. Brown have formed a partnership, under the name of D. H. Morris & Co., for the purpose of conducting a general mercantile business; capital \$1250.

Newport News—Publishing.—The Daily Press Co., publishing a newspaper, has incorporated its business, the incorporators being H. M. Lash, president; C. E. Thacker, secretary-treasurer, and F. C. Lash. The capital stock is \$5100.

Norfolk—Tile Company.—The Virginia Mosaic Tile Co. has been incorporated, with A. R. Duman, president; Arthur Parati, general manager; capital stock \$3000.

Petersburg—Electric-light Plant.—The city continues to have under consideration the erection of a plant for street electric lighting, etc. Address the mayor.

Focahontas—Water Works.—The city is considering the issuance of bonds for the establishment of a system of water works. Address the mayor.

Roanoke—Electric-light Plant.—The ordinance committee of city council has been instructed to prepare an ordinance to be submitted to the voters on the question of erecting an electric-light plant. The city engineer has been instructed to prepare plans and estimates. For information address the mayor.

WEST VIRGINIA.

Benwood—Electric Plant.—Replying to an inquiry regarding the proposed electric plant of the Baltimore & Ohio Railroad, W. M. Greene, general manager, Baltimore, Md., says that nothing definite has yet been determined, but a station may possibly be built next summer.

Elk Garden—Coal Mine.—Edward Dixon has opened a coal mine.

Grafton—Ice Factory.—The Grafton Ice Co. has increased its capital stock and will remove its present plant from South Grafton to West Grafton, and will also erect cold-storage building in connection with same.

Hinton—Water-power Development.—J. Turner Morehead, of North Carolina, and sons have purchased the water-power rights at New River Falls and at Big Kanawha Falls, seven miles from Hinton, and they intend to thoroughly develop the property. Electric plants will be erected at each of the points mentioned for furnishing power to mining and other plants in the section referred to. Contracts for the construction of masonry and excavation for power at New River Falls has already been awarded to A. M. Volz and Mr. Gentry, of Staunton, Va. Mr. Morehead can be addressed either at Spray, N. C., or Leaksville, N. C.

Sistersville—Electric-light Plant.—The Sistersville Electric Light & Power Co. has been incorporated by E. A. Durham, president; W. G. Kohl, secretary, and W. J. Neuenschwander, treasurer, with a capital stock of \$12,000, with privilege to increase same to \$500,000, for the erection of the electric-light plant previously noted.

West Virginia—Electric-light Plant.—Work will shortly be commenced on the erection of the electric-light plant recently noted. For information address cashier Tyler County Bank.

Wheeling—Oil and Gas Company.—How-

ard Thompson, A. F. Garmires, James Story and F. C. Caldwell, of Wheeling, and A. T. Strong, of Cleveland, Ohio, have incorporated the Powhatan Oil & Gas Co., with a capital stock of \$300,000, for the purpose of developing oil and gas wells and transporting the products in tanks and pipes, etc.

Wheeling—Oil and Gas Wells.—It is rumored that a Pittsburg (Pa.) company has purchased the oil and gas properties in Tyler county of the Spragg Oil & Gas Co. for \$150,000.

BURNED.

Allentown, La.—The large dryhouse of Allen Bros. & Wadney; loss about \$6000.

Brookside, Ala.—The large store of the Sloss Iron & Steel Co.; loss about \$15,000.

Clifton Mills, W. Va.—The flour and saw mill of George Evans; loss about \$1200.

Cumberland, Md.—The boiler-house at the warehouse of the James Clark Distilling Co. near Cumberland.

Danville, Va.—The tobacco factory of the American Tobacco Co.; estimated loss \$150,000.

Florence, Ala.—The Florence Wagon Factory; estimated loss \$27,000.

Fredericksburg, Va.—The polishing and finishing works of Swift & York's Battlefield granite quarries; estimated loss \$4000.

Goochland C. H., Va.—The Goochland county courthouse. Address the county clerk.

Hawthorn, Fla.—The wheelwright and blacksmith shop of J. B. Braswell; loss about \$1200.

Longview, Texas.—The buildings of the First National Bank, W. A. Williams, B. F. Lewis, C. W. Lawrence, Louis Newman, T. D. Plinkham and S. S. Malins; total loss about \$60,000.

Norfolk, Va.—The stables of the Norfolk Driving Club and Fair Association; estimated loss \$30,000.

Summerville, S. C.—The saw mill of R. C. Stotts at Dry Valley.

Van Alstyne, Texas.—The Commercial Hotel.

Wells, Texas.—The saw mill of W. H. Spinks; loss about \$5000.

BUILDING NOTES.

Atlanta, Ga.—Apartment House.—A. W. Farlinger will erect a four-story apartment house of brick and stone, of sixty rooms, and costing about \$40,000.

Atlanta, Ga.—Buildings.—Permits have been granted to James R. Seawright for the erection of three two-story brick stores, to cost \$4200; also for a two-story frame residence, to cost \$1500.

Atlanta, Ga.—Business Block.—G. L. Norrman has prepared plans and contract has been let to M. L. Lewman & Bro., of Louisville, Ky., for the erection of the six-story business block recently noted as to be erected on the site of the Markham Hotel. For information address Dr. R. D. Spaulding at Atlanta.

Atlanta, Ga.—Crematories.—The city will probably appropriate \$24,000 for the erection of two new garbage crematories. For information address secretary board of health.

Atlanta, Ga.—School Building.—The finance committee of the board of education will ask for an appropriation of \$15,000 for the erection of a new colored school building. Address the mayor.

Baltimore, Md.—Dwellings.—John L. Mueller will build nine two-story dwellings.

Baltimore, Md.—Church.—St. Patrick's Catholic Church, Broadway and Bank street, will shortly begin the erection of a new edifice. For information address Rev. James F. Donohue, pastor.

Baltimore, Md.—Church.—Jos. E. Sperry will prepare plans for a new church building for St. Mark's E. L. Church, to cost about \$70,000.

Benwood, W. Va.—W. M. Greene, general manager of the Baltimore & Ohio Railroad, (office, Baltimore, Md.), informs us that nothing definite has yet been determined as to the improvements at Benwood. A station may possibly be built next summer.

Chattanooga, Tenn.—Dwellings.—E. E. Meredith is preparing for the erection of a cottage. Plans are being prepared for a cottage to be erected in Highland Park by J. Fred. Ferger.

Chattanooga, Tenn.—Residence.—T. C. Latimore is having plans prepared for the erection of a two-story residence to cost about \$2500.

Chattanooga, Tenn.—Church.—B. F. Whiteside has contract for erection of church, to cost \$4000.

Covington, Ky.—Building.—Chas. Kearnes, Sr., and Hugh McDonald will erect a four-story building at a cost of \$30,000. Boll & Taylor have prepared plans.

Greeneville, Tenn.—Dwellings, etc.—J. F. Swingle will erect a building; Andrew Brown, a dwelling, and H. T. Campbell, a dwelling.

Highland, Texas—Hotel.—C. T. Cade will build a hotel.

Houston, Texas—Church.—O. H. P. Rudessill & Son have prepared plans for the new Presbyterian church, for which J. W. Burnett has contract.

Houston, Texas—Business Block.—Eug. Heiner has prepared plans for proposed business block of Jos. F. Meyer.

Houston, Texas—Stores.—O. H. P. Rudessill & Son have prepared plans for J. A. Sternberg's proposed three new stores.

Knoxville, Tenn.—Church.—The Fort Saunders Presbyterian congregation will erect a new church at a cost of about \$4000. Address the pastor.

Knoxville, Tenn.—A bill has been introduced in the legislature authorizing the issuance of \$50,000 of bonds to erect market-house and school buildings. Address the mayor.

Laredo, Texas—Schools.—The city council has authorized the issuance of \$35,000 in bonds for the erection of four new public-school houses.

Little Rock, Ark.—Clubhouse.—The Concordia Club contemplates the erection of a four-story iron and granite building, with plate-glass front; L. M. Levy, chairman of committee.

Macon, Ga.—Residence.—P. E. Dennis has prepared plans for a residence to be erected by E. W. Burke.

Memphis, Tenn.—Churches.—The Catholic and Episcopal congregations are making preparations for the erection of two new cathedrals. Weathers & Weathers, of Memphis, are preparing plans for each.

Norfolk, Va.—Stables.—The Driving Club of Norfolk, John Mariner, president, will rebuild its stables which were recently burned at a loss of \$6600.

Nashville, Tenn.—Exposition Building.—Site has been selected and plans prepared by W. A. Swazey, of St. Louis, Mo., for the erection of a Missouri exposition building at Nashville. The structure will be built on a colonial style and will be 70x45 feet.

Paulding, Miss.—Jail.—Contract will be let for the erection of a new jail. Address T. Q. Brame, clerk.

Raymond, Miss.—City Hall.—Steps will be taken by the new board of mayor and selectmen to determine the issuance of \$4000 of bonds for the erection of a city hall. Address the mayor.

Richmond, Va.—Dwellings.—Armitage & Co., of the Armitage Manufacturing Co., 3216 Williamsburg avenue, will erect a number of dwellings.

Richmond, Va.—Theatre.—Lewis Ginter and associates have, it is stated, purchased site and will erect a large theatre.

Richmond, Va.—Opera-house.—Edward H. Allen, of Washington, D. C., contemplates the building in Richmond of a \$150,000 opera-house.

Roanoke, Va.—Business Block.—A. E. King and G. G. Gooch will erect at once a business house of two stories, with a Washington buff-brick front. Plans have been prepared by H. H. Huggins and contract let to J. B. Barbour.

Sabine Pass, Texas—Hotels.—Messrs. Kountze Bros. (bankers, of New York city and Sabine Pass,) will build two hotels, one to be first-class in every particular, the other to be more of a boarding-house.

St. Louis, Mo.—Church Building.—A new church building will be erected at a cost of \$35,000. Address E. B. Adams for information.

St. Louis, Mo.—Hotel.—The St. Nicholas Hotel Co. has been incorporated by H. S. Eames, Edgar Eames and Richard Everette, with a capital stock of \$10,000.

Washington, D. C.—Apartment House.—N. T. Hailey has purchased site and prepared plans for the erection of five-story apart-

ment house, to be 50x150 feet and cost about \$100,000.

Washington, D. C.—Synagogue.—The Washington Hebrew congregation have accepted plans prepared by Stutz & Pease for the erection of a new synagogue to cost about \$60,000.

Washington, D. C.—Apartment House.—A company composed of Senator W. M. Stewart, Henry Ives Cobb, of Chicago, Ill.; C. G. Kappler and S. R. Ireland will be formed to transform a residence into an apartment house at a cost of between \$300,000 and \$500,000. Mr. Cobb has completed plans for the building.

Washington, D. C.—Dwellings.—J. F. Denison has prepared plans for a three-story frame dwelling to be erected by James T. Levy. C. H. Gladden has prepared plans for three three-story brick dwellings to be erected by Richard W. Wilkinson. Galloway & Sons will erect for L. H. Bentley a two-story frame and brick dwelling; plans have been prepared by H. B. Davis. A. Goenher will erect for Ruppert & Voight three brick dwellings, two stories high, with cellar. Plans have been prepared by C. W. Sommerville for a two-story brick and frame dwelling to be erected by Galloway & Son. Six brick cottages will be erected at Holmed Manor for Myers & Anderson from plans prepared by B. F. Myers.

Waynesboro, Va.—Opera-house.—The Waynesboro Masons will equip a part of their hall as an opera-house. Scenery and second-hand opera chairs will be purchased. Address R. G. Wright, secretary.

Westport, Mo.—City Hall Building, etc.—The city will expend \$20,000 on erection of city hall building and equipping of fire department. Address the mayor.

RAILROAD CONSTRUCTION.

Railways.

Abbeville, Ala.—It is reported that the Abbeville Southern Company, which is a branch of the Plant system, is contemplating the construction of thirty or forty miles additional road this year. S. G. McLondon, president, may be addressed at Thomasville, Ga.

Aberdeen, N. C.—It is reported that the Aberdeen & Rockfish road is to be extended a distance of about eight miles. John Blue, at Aberdeen, is general manager.

Aberdeen, N. C.—A bill has been introduced in the State legislature to incorporate the Moore County & Western Railroad Co. (This is supposed to be the scheme to extend the Moore County road to Concord.) W. B. Eekhout is manager of the Moore County road.

Boyle, Miss.—It is reported that the Boyle & Sunflower River road is to be extended from Boyle to a connection with the Rosedale & Mississippi Valley road. The extension would be about fifteen miles long. L. V. Boyle, at Boyle, is president.

Charleston, W. Va.—The Big Mountain Railway Co. has been formed by G. S., C. B. and L. W. Couch and others, of Charleston, to build a line from Cedar Grove up the Kelly Creek and Kanawha River valleys to a connection with the Chesapeake & Ohio.

Clarksburg, W. Va.—It is reported that Richard Lowndes, of Clarksburg, is interested in a scheme to build a line from Pittsburgh to the principal coalfields of the State.

Dallas, Texas.—It is reported that the company controlling the Dallas Terminal & Union Railway will build a road between Dallas and Fort Worth, to be twenty miles in length.

Davisville, Ga.—A syndicate of Atlanta parties are constructing a road from Davisville to Fitzgerald, Ga., about twenty miles long. J. W. Pope, of Atlanta, is president.

Denison, Texas.—The Denison & Northern road is to be completed, according to the statement of the president, between Denison and Daugherty, I. T., as originally intended. P. E. Fairbanks, of Denison, is secretary. Chicago and Kansas City parties are interested in the project.

Hamburg, Ark.—It is reported that steps are being taken by the Sunnyside Company to complete the line from Hamburg to the Mississippi river and eventually to Little Rock. About eight miles of the road are completed. The Sunnyside Company, 102 Broadway, N. Y., may be addressed.

Harriman, Tenn.—It is rumored that the Southern Company may secure control of the unfinished Tennessee Central and complete it to Harriman in order to obtain a line to Nashville.

Higginson, Ark.—The Higginson & Des Arc Railway Co. has been formed to construct a line between the points named

through White county. Charles Hedrick and Henry B. Walker, of Higginson, and Alfred J. Smith, of Egbert, are interested. The road will be about twenty-five miles long.

Hub, N. C.—It is stated that the Butters Lumber Co. may extend its narrow-gage line to Nichols, S. C. The extension would be about nine miles long.

Kansas City, Mo.—The Kansas City, Pittsburg & Gulf has begun laying track between Horatio and Mena, Ark.

Kennett, Mo.—R. B. Anderson and R. G. Ranney, of Cape Girardeau, Mo., are interested in a company formed to build a line about twenty miles long from Kennett to the State line between Arkansas and Missouri. The title of the company is the Kennett & Osceola, and the capital \$200,000.

La Follette, Tenn.—The Manufacturers' Record is advised that the La Follette Railway Co. expects to complete its road by April 1. It will be twelve miles long. It is not a part of the Tennessee & Northern proposed system as yet.

Lexington, Ky.—General Manager J. D. Livingston, of the Lexington & Eastern, advises the Manufacturers' Record that the proposed extension of this line into the coalfields of Morgan county, Kentucky, will be thirty miles long. Parties interested in the coal deposits, it is stated, will build the line, but it will be operated by the Lexington & Eastern. The terminus of the road will be Walnut Grove, Ky.

Little Rock, Ark.—The Little Rock & Mississippi River road has been placed in the hands of Charles F. Pentzel as receiver, who, it is stated, may complete it to Little Rock. The road is twenty-eight miles long, and the proposed extension would be eighteen miles.

Mayfield, Ky.—Surveys are being made, it is reported, for a shorter route for the Illinois Central by a cut-off from Calvert City to Mayfield. J. F. Wallace, at Chicago, is chief engineer.

Middletown, Md.—The company promoting the proposed electric line has had the route surveyed between Middletown and Myersville and is to obtain a charter at once. The road will be five miles long. Reno S. Harp, of Frederick, Md., may be addressed.

Montgomery, Ala.—It is reported that surveys are about to be finally made for the extension of the Mobile & Ohio from Montgomery to Columbus, Miss. A. G. Kleinbach, of New York, is conducting the survey.

Nashville, Tenn.—It is stated that a company has been formed to build a road from Rockwood, Tenn., to the ore beds, six miles distant, and that the contract has been awarded to Brady & Co., of Nashville. H. W. Brennan, at Nashville, may be addressed.

Newport, Tenn.—It is reported that the East Tennessee Timber and Mining Corporation, which has purchased a tract of timber and ore lands in Cocke and Sevier counties, will build a railroad thirty miles long from a connection with the Bristol & Elizabethton road and through the lands mentioned. James F. Brooks, of Boston, a banker, is reported as connected with the enterprise.

Pensacola, Fla.—It is reported that the Louisville & Nashville has bought 100 acres of land for the yards referred to in the Manufacturers' Record recently. R. Montford, at Louisville, is chief engineer.

Rowlesburg, W. Va.—Right of way has been secured for a portion of the proposed line from Rowlesburg along the Cheat River valley across the West Virginia-Pennsylvania line. The road is to be about fifty miles long, and is to be called the West Virginia Northern. The company includes L. H. Hamilton, J. J. and J. F. Stoer, of Philadelphia.

Texarkana, Texas.—The Big Woods Lumber Co. has reorganized, with George W. Fouke, president, and will construct nine miles of railroad to timber lands, it is stated.

Waco, Texas.—R. P. Duncan and E. M. Lord are interested in a line proposed from Waco to Headsville. A company may be formed to build it. The distance is forty-five miles.

Winston-Salem, N. C.—The Manufacturers' Record learns on good authority that the Norfolk & Western Company is interested in the proposed road from Winston-Salem to a connection with the Seaboard Air Line. The Winston-Salem Chamber of Commerce has taken up the matter.

Street Railways.

Florence, Ala.—A. P. Harland and others have secured a franchise to build a street railway in Florence, to be operated by steam or electric power.

Gainesville, Ga.—Samuel C. Dunlap, C. C. Sanders and others are promoting an electric road to be built in Gainesville and vicinity.

Gainesville, Ga.—C. E. King, J. M. Hunt and others intend forming a company to construct an electric railroad in and near the town. [This is a separate enterprise from the one already noted under Gainesville.—Ed.]

New Orleans, La.—The New Orleans Traction Co. is considering the idea of changing three miles of line now operated by animal power, to be utilized by electric motors. C. D. Wyman is general manager.

Pensacola, Fla.—Work of relaying the Pensacola Railway line with heavier rails has begun. The company is considering the adoption of electric motors or a compressed-air system on the road. W. H. Bosley, of Baltimore, may be addressed.

Savannah, Ga.—The Electric Railway of Savannah has been bought by a syndicate represented by Herman Myers. It is stated that most of the track will be relaid and additional rolling stock purchased. The road is thirty-five miles long in all.

St. Louis, Mo.—The St. Louis & Suburban Railway Co. has decided, it is stated, to extend its electric line to Kirkwood, in the suburbs. J. B. Case is vice-president of the company.

Washington, D. C.—The Capital Traction Co. has ordered rails for its electric line between Washington and Anacostia suburb. The overhead and underground electric system will be used on different parts of the line. A. E. Randle is president.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Boiler.—R. P. Chew, Charlestown, W. Va., wants a second-hand locomotive boiler, forty horse-power.

Boiler.—The Builders' Supply Co., St. Augustine, Fla., is about to purchase a return tubular boiler for saw mill, to be sixty to eighty horse-power.

Boiler.—Proposals will be opened January 21 for supplying one steel boiler, horizontal tubular, fourteen feet long, fifty-four inches diameter, containing sixty-four three-inch tubes, for sewage-pumping works, etc., to be installed at Soldiers' Home, Hampton, Va. Address William Thompson, National Soldiers' Home, Va.

Boilers.—R. S. Stevens, 547 Carondelet street, New Orleans, La., is in the market for two seventy-five horse-power return tubular boilers.

Boilers and Engines.—Clark & Adams, Elberton, Ga., may need some second-hand engines and boilers.

Building Materials.—J. H. Clark, Angleton, Texas, wants to buy tin or iron pressed shingles, roofing slate, patent plaster, roofing, etc.

Carpenter-work Machinery.—J. H. Clark, Angleton, Texas, wants to buy foot-power machinery for use on carpenter work, etc., in building construction.

Cotton Compress.—The W. C. Bradley Co., Columbus, Ga., is asking bids on the erection of a cotton compress.

Cotton Gin.—S. A. Simmons, Walker's Bridge, Miss., will buy cotton-gin equipment.

Distillery Apparatus.—E. R. Betterton, Chattanooga, Tenn., will want a copper doubler, 500 gallons capacity, with a coil in it.

Electric Lighting.—The city of St. Louis, Mo., will open bids April 9 for lighting of its streets and public places with electricity. For full particulars address Robert E. McMath, president board of public improvements.

Electric-light Plant.—Correspondence is invited from builders of electric-light plants by the city of Raleigh, N. C. Address John C. Drewry, chairman of committee.

Engine.—Hubbard Bros., Mobile, Ala.,

want to buy a second-hand engine, twelve to fourteen inches diameter by 18 to 20-inch stroke, with flywheel 20-inch face and from seventy-two to eighty-four inches diameter. Price must be low.

Engines.—Wanted, a left-hand common slide-valve twenty inches diameter by 30-inch stroke engine, and one engine of sixty horse-power, Corliss pattern; each engine to be complete and guaranteed in good running order. Give full particulars in first letter. Address Box 452, Middleport, Ohio.

Fire Engines.—The city fire commissioners of Baltimore, Md., will receive proposals until January 20 for furnishing to the city two steam fire engines of 650 gallons capacity, one steam fire engine of 750 gallons capacity, and two combination chemical engines and hose wagons; Stanley Baker, secretary.

Furniture (Opera-house).—Second-hand chairs and scenery for opera-house will be wanted by the Masons at Waynesboro, Va. Address R. G. Wright, secretary.

Furniture Machinery.—E. A. Ebert, Salem, N. C., wants prices on chair machinery.

Gasoline Engine.—D. B. Greathouse, Lewistown, Ky., wants a two or two and one-half horse-power gasoline engine, to be used in summer for power on a small pleasure boat and in winter for operating a corn crusher, pump, etc.; second-hand machine in good condition preferred.

Grist Mill.—S. A. Simmons, Walker's Bridge, Miss., will buy grist-mill equipment.

Heating and Ventilating Apparatus.—Bids will be received until February 4 for furnishing the heating and ventilating apparatus, cooking and plumbing apparatus, combination gas and electric fixtures, etc., for West Virginia Insane Hospital; plans and specifications at office of Franzheim, Giese & Farns, Wheeling, W. Va.; at office of Bartlett, Hayward & Co., Baltimore, Md., or at office of John B. Floyd, Charles-ton, W. Va. Address C. L. Thompson, president, Weston, W. Va.

Horse-collar Machinery.—The San Antonio Horse Collar Manufacturing Co. wants collar blocks and pad presses.

Iron Work.—Bids are wanted on platforms and railings to be erected in the Baltimore Music Hall for temporary use (one week). For information address John J. McElroy, 13 South Charles street, Baltimore, Md.

Knitting Machinery.—J. D. Ozier, Corinth, Miss., wants to correspond with manufacturers of knitting machinery.

Machine Tools.—Clark & Adams, Elberton, Ga., may need second-hand or new outfit for machine shops.

Marine Railway.—McAnge & Smith, Suffolk, Va., are in the market for material for small marine railway at cash price; second-hand outfit preferred.

Mining Machinery.—The Golden City Mining & Milling Co., Villa Rica, Ga., will want mining and milling machinery for gold mines later on.

Mining Machinery.—J. R. Finley, Marion, Ky., wants to obtain full information regarding ochre mining, such as where to market the material, prices obtained, what machinery is used, estimates on same, etc. Correspondence solicited.

Quarrying Machinery.—C. St. C. Kirk, Charleston, S. C. (39 Broad street), will want machinery for stone quarry.

Piping.—W. R. Hughes, Pulaski Mining Co., Atkins, Va., wants to buy about 300 feet wrought-iron pipe, four-inch, new or second-hand. Quote prices.

Railway Equipment.—John Blue, Aberdeen, N. C., wants prices on second-hand 40-pound rails.

Railway Equipment.—The Tennessee, Georgia & Atlantic Railway Co., Ed. A. Richards, general manager, New York city, expects to be in the market for rails about April 1.

Saw Mills.—Higgs Bros., Dresden, Tenn., wants to buy or exchange for a heavy single rig saw mill that will carry a 60 or 70-inch saw; rolls of carriage to be on axle that extends entire width of carriage.

Telephone Equipment.—Bids for material and erection of 25-mile telephone line will be received. Address R. W. Storrs, De Funis Springs, Fla.

Towboat.—Graham D. Fitch, captain engineer, Memphis, Tenn., will open bids February 1 for construction of one stern-wheel towboat.

Wagon Materials.—J. B. Kelly, Sanford, N. C., wants catalogues and prices on wagon materials of all kinds.

Warehouse Supplies.—N. H. Street, New Berne, N. C., will need apparatus for warehouse, such as elevators, scales, etc.

Woodworking Machinery.—J. A. Parrish, Bettie, Texas, wants to correspond with manufacturers of spoke lathes and tenoners.

Woodworking Machinery.—H. L. Merritt, Blenheim, Ontario, wants to correspond with makers of handle and spoke machinery.

Woodworking Machinery.—The Sparta Buggy Co., Sparta, N. C., wants equipment of machinery for buggy factory.

Woodworking Machinery.—The Brown Manufacturing Co., Aberdeen, Miss., wants a second-hand joiner; state price.

TRADE NOTES.

The Sanford, Chamberlain & Albers Co. has succeeded to the business of Sanford, Chamberlain & Albers, Knoxville, Tenn. A corporation was formed in order to extend the wholesale and manufacturing drug business of this house.

A plant of horizontal turbines installed at the cotton mill of the John P. King Co., Augusta, Ga., has been tested and found to be entirely satisfactory. The results indicate the care with which these turbines are built. S. Morgan Smith, York, Pa., is the manufacturer. These turbines are mounted on horizontal shaft in outer iron cases and develop 2700 horse-power.

The Tom Fritts Hardware Co., Chattanooga, Tenn., has purchased the stock of hardware, mill and mine supplies of the O'Connell-Rogers Co. A large supply will be carried by this company. Thomas W. Fritts & Co., hardware and farm implements, will continue as usual at their Market street store in Chattanooga, being a separate concern.

Mr. Charles Davis, president of the Davis & Egan Machine Tool Co., of Cincinnati, Ohio, has just returned from a six months' trip to Europe, where he visited Russia, Germany, France, Austria, Norway, Sweden, Belgium, Holland, Denmark and England, establishing agencies in all the large cities in these countries. He secured many large orders direct from the consumers, and as a result of his trip the company is now working nearly 600 men twelve hours per day, and has orders on its books to keep running full force until the first of May.

When a new invention is to be patented a successful attorney should be selected to procure the patent. The firm of Mann & Co. has been engaged in the patent business for more than twenty years. During that time it has had 2800 applications for patents in its hands. The measure of success in soliciting patents from the government will be seen in the statement, while the patent office records show that about 33 per cent. of all applications for patents are finally rejected for one cause or another, the private records of this firm show that less than 10 per cent. of its applications are rejected. The firm has its headquarters at 544 Equitable Building, Baltimore.

A recent letter received by the Armitage Manufacturing Co., Richmond, Va., speaks highly of its roof paints. The letter is from W. Denton & Co., Centreville, Mich., and says: "Kindly send us at the earliest possible moment another barrel of paint. We desire this to use on a felt roof which we have had on for some time, and also a portion of it to use on a new shingle roof. We have experimented with a great many kinds of roof paints, but have never had anything entirely satisfactory until we used yours.

The felt roofing used for a nearly level roof, having a fall of less than ten inches in twenty feet, about which we wrote you, has been very satisfactory. It has been subjected to some of the most trying rain and has never leaked a drop. The barrel of paint which we used on our iron roof has also proven very satisfactory and will save the necessity of a new roof."

Mr. W. Crouch, member of the Institute of Civil Engineers, residing in Glasgow, and associated with some of the largest enterprises of Great Britain, was sent over some time ago to examine and make a report on the South Gila Co., which is building the enormous dam at Sentinel, Ariz. The report is interesting. That portion of it referring to the method of construction reads as follows: "A Lidgerwood cableway is stretched across the canyon, on which a trolley runs, and by it the stones are picked up and deposited wherever required on the work. This appliance is a very ingenious one, and has been very successfully used in the construction of similar work in the States, and for rapidity of handling material and depositing it on any part of the work is, in the circumstances in question, undoubtedly superior to

any system of railways or tramroads that could be devised." J. F. Ward was the chief engineer of the dam.

The following is the list of machinery shipped by the American Engine Co., Bound Brook, N. J., during the month of December, 1896: Sixty horse-power American-Ball engine to the Scranton Truth; fifty horse-power and a twelve horse-power motor to the Western Newspaper Union; 100-light dynamo to the Chattanooga Daily News; sixty horse-power American-Ball engine to the Albany Journal; five horse-power motor to the Gazette Publishing Co.; twelve horse-power motor to the Toledo Blade; twelve horse-power motor to the W. D. Boyce Co.; nine-kilowatt dynamo to the Age-Herald Publishing Co.; nine-kilowatt dynamo to the Dayton Journal; three horse-power motor to the Indianapolis Sun; 75-kilowatt dynamo to the Inquirer Co.; three horse-power motor to the Harrisburg Telegram; nine-kilowatt dynamo to the Jarecki Manufacturing Co.; 100 horse-power motor to the Boston Herald.

The vertical engines being built by the Ball Engine Co., Erie, Pa., for electrical service have been received with great favor by those who appreciate merit and good workmanship in an engine. Since October last these works have been running till 10 o'clock every night, and part of the time all night, on account of several large contracts received for vertical engines. Some of these orders are just being completed. One of these is a 400 horse-power vertical cross-compound engine, arranged for direct connection to 225-kilowatt Siemens-Halske generator, which was shipped a few days ago to the Nicopol Maripol Mining & Metallurgical Co., Maripol, Russia, and will furnish electric power to various machinery in the steel works mentioned. The company will ship in a few days to the Chicago Public Library four 200 horse-power vertical cross-compound and one 100 horse-power vertical tandem compound engine, each engine being direct connected to two General Electric Co. machines. The form of arrangement and the details of these engines are entirely new, and the plant when erected will be a very complete one. Besides the above, there are being built in the works at present 400 horse-power vertical cross-compound engine and 150 horse-power vertical cross-compound engine for the Shoenerberger Steel Co., of Pittsburgh, Pa., each of which is direct connected to Siemens-Halske generators; also for the Apollo Iron & Steel Co., of Apollo, Pa., 150 horse-power vertical cross-compound engine, direct connected to a General Electric alternating lighting machine, both the dynamo and exciter being driven from the shaft of the engine and arranged on the same base with the engine.

The works of the Gas Engine & Power Co., Morris Heights, New York, show a scene of special activity. This company has attained a wide reputation as a builder of fine steam yachts and water craft of other character. A number of yachts are now being built for well-known people. The Gas Engine & Power Co. and Seabury & Co.'s new shops, now in course of erection at Morris Heights, are an extension to the present plant, and will consist of a steel building 150 feet long, forty-five feet wide and eighteen feet height in the clear. This is to be used as a boiler and smith shop. A steel building to be used as machine shop is 250 feet long, seventy-six feet wide, eighteen feet height in the clear. These buildings are one-story, with a gallery around the sides. The small manufacturing machinery is placed in the gallery, while the large tools are on the main floor. A traveling crane of fifteen tons capacity has been added, which runs through centre of shop, and is in connection with 30-ton jib crane placed on their docks; this to be used for hoisting and loading heavy machinery, etc., to and from vessels. The crane runway also extends to the railroad tracks, and is to be used for the loading and unloading of cars. The factory buildings and yards have recently been equipped with complete electric arc-light system. New marine railways are finished, and are now being fitted with steam-power cradle. Wire ropes will be used instead of chain. This is considered an improvement, as no jar is felt in hauling vessels. One set of ways are adapted for hauling vessels 200 feet in length and the other set for small craft. A new "Seabury" boiler, with 2000 square feet of heating surface and fifty-five square feet of grate surface, has recently been fitted in the power-house and is running the entire manufacturing plant, consisting of four engines; also steam-heating appliances, etc. A "Seabury" fore and aft compound condensing engine, eleven and sixteen inches by 12-inch stroke, is being built, and when completed will be used to operate the machinery in the new steel buildings.

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FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

No advertisements but those of a financial character will be accepted for the following page.

A Chain of Banks.

S. Wittkowsky and others, of Charlotte, N. C., are interested in a scheme to establish a system of banks in that State, with the principal bank at Charlotte. What is known as the Canadian system is to be used. Mr. Wittkowsky has been connected with several of the Charlotte banks.

Another Prosperous Bank.

In the article referring to the Baltimore savings banks in the last issue of the Manufacturers' Record the Central Savings Bank should have been included. This bank, which recently completed one of the finest office buildings in the city for its own use and for investment purposes, makes a very satisfactory showing, according to the report of the auditing committee. During 1896 its deposits increased \$203,198.64. It now has deposits aggregating \$4,953,506.17 and has 15,713 depositors.

A New York Corporation.

The reorganization of the firm of Clapp & Co., New York, is an interesting piece of news to the many friends of this well-known house. This has been accomplished by the incorporation of O. W. Clapp & Co., with offices in the Mills Building, New York city, with an authorized capital of \$300,000. This concern, besides the strength of its financial resources, enjoys exceptional facilities for effective service in trading in stocks, grain, cotton and provisions. Private wire connections with the principal cities of the East and West and close relations to important interests enables this concern to give early and valuable information. The weekly market letter published by this firm is of especial value in studying the market conditions. Its annual souvenir book is also a useful work of reference.

Dividends and Interest.

In addition to the dividend and interest disbursements in previous issues of the Manufacturers' Record for the last half of 1896, the following have been made:

Baltimore, Md.—German Bank of Baltimore, 2½ per cent., semi-annual; People's Bank, 2 per cent., semi-annual; Home Fire Insurance Co., 5 per cent., semi-annual; National Howard Bank, 2½ per cent., semi-annual; National Exchange Bank, 3 per cent., semi-annual; National Union Bank, 3 per cent., semi-annual; National Farmers and Planters' Bank, 5 per cent., semi-annual; National Fire Insurance Co., 3 per cent., semi-annual; Howard Fire Insurance Co., 3 per cent., semi-annual; American Fire Insurance Co., 4 per cent., semi-annual.

Winchester, Va.—Shenandoah Valley National Bank, 5 per cent., semi-annual.

Columbus, Ga.—Georgia Home Insurance Co., \$3 per share, quarterly.

Elizabethton, Tenn.—People's Bank, 20 per cent., annual.

Raleigh, N. C.—Mechanics and Dime Savings Bank, 3 per cent., semi-annual.

Louisville, Ky.—Henderson Bridge Co., 2½ per cent., semi-annual.

Americus, Ga.—Bank of Southwest Georgia, 3 per cent., semi-annual.

Cedartown, Ga.—Commercial Bank, 4 per cent., semi-annual.

Cumberland, Md.—Cecil Shoe Co., annual dividend.

Augusta, Ga.—Augusta Cotton Factory, 3½ per cent., semi-annual.

Memphis, Tenn.—Guardian Fire Insurance

Co., 10 per cent. annual; Mercantile Bank, 3 per cent., semi-annual.
Pikeville, Ark.—Bank of Pikeville, 5 per cent., semi-annual.
Harmony Grove, Ga.—Northeastern Bank, 4 per cent., semi-annual.
Atkins, Ark.—Bank of Atkins, 9 per cent., annual.
Calhoun, Ga.—Bank of Calhoun, 3½ per cent., semi-annual.

Louisville, Ky.—National Building and Loan Association, 4 per cent., semi-annual; Louisville Insurance Co., 5 per cent., semi-annual; Bank of Kentucky, 4 per cent., semi-annual.
Meridian, Miss.—First National Bank, 6 per cent., semi-annual.

Wheeling, W. Va.—German Fire Insurance Co., 5 per cent.
Gaston, N. C.—Modena Cotton Mills, 4 per cent., semi-annual.

Columbia, S. C.—Central National Bank, 3 per cent., semi-annual.
Newport News, Va.—Citizens and Marine Bank, 3 per cent., semi-annual.

Washington, Ga.—The Exchange Bank, 4 per cent., semi-annual, and 3 per cent. added to surplus.
Pensacola, Fla.—Citizens' National Bank, 4 per cent., semi-annual.

Jackson, Tenn.—Second National Bank, 10 per cent., annual.
Opelika, Ala.—Shapard Bank, 8 per cent., annual; First National Bank, 8 per cent., annual.

New Orleans, La.—People's Bank, 3 per cent., semi-annual.
Yorkville, S. C.—Fort Mill Savings Bank, 4 per cent.

Covington, Ky.—First National Bank, 4 per cent., semi-annual; German National Bank, 5 per cent., semi-annual; Newport Bank, 2 per cent., semi-annual.
Georgia Southwestern Railroad Co., \$2,500 per share.

Nashville, Chattanooga & St. Louis Railway Co., 2 per cent.
Statesville (N. C.) Cotton Mills, 2 per cent.

New Corporations.

The Farmers and Merchants' Bank has been organized at Warrensburg, Mo., with \$30,000 capital.

The Commercial Mutual Life Insurance Co. has been formed at Atlanta by Donald Bain, Frank S. Ellis and others.

The White Building and Loan Association has been formed at Fort Mill, S. C., by Samuel E. White, J. M. Pratt and others.

John F. Lewis, of Valdosta, Ga., and others are interested in a proposed bank at Cordele, Ga., with a capital of \$100,000.

James M. Stephens, E. P. McBurney and others, of Atlanta, are forming a loan association to be called the People's Loan Association.

New Securities.

The town of Westport, a suburb of Kansas City, Mo., has sold \$101,000 worth of bonds for improvements to N. W. Harris & Co., of New York and Chicago.

The city of Macon, Ga., has decided to sell \$130,000 of its proposed issue of 4½ per cent. bonds, and bids will be received until February 9 by the clerk of the city council.

Financial Notes.

The Commercial and First National banks of Lynchburg, Va., have consolidated under the title of the latter.

The American National Bank of Baltimore has declared a semi-annual dividend of 2½ per cent. instead of 2 per cent. as stated in the last issue of the Manufacturers' Record. This bank has been paying semi-annual dividends of 2½ per cent. since its organization in 1891.

TRADE NOTES.

The Thomas Manufacturing Co., Little Rock, Ark., just completed tests of new and improved machinery to be placed upon the market the coming season. Two complete ginning systems have been erected, which embody principles not used by any other manufacturer of cotton machinery. Tests made prove the machinery to be per-

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Correspondence Invited.

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Paid-up Capital, \$1,000,000.

Surplus, \$1,000,000.

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This company is a *Legal Depository* for funds in the hands of Trustees or Administrators, and allows interest on same pending distribution.

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SOLICITS YOUR PATRONAGE.

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Bonds furnished Officers and Employees of Mercantile Houses, Banks, Railroads, Express and Telegraph Companies,

Offices of States, Cities and Counties. Becomes Surety on Bonds of Guardians, Assignees, Executors, Trustees, Replevins, Injunctions, Administrators, Receivers, Attachment, and all undertakings in Judicial Proceedings in State and United States Courts. Does not act as Executor, Administrator or Trustee. Patronage of Lawyers specially solicited and special rates given.

CAPITAL \$500,000.00

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TOTAL RESOURCES \$1,000,000.00

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GEORGE C. S. HUERMANN, of Baltimore, Md.

L. D. HEART CASHIER FIRST NAT'L BANK DURHAM, N. C.

H. B. TILDEN, of Baltimore, Md.

The stock of this company has been listed on the New York Mining and Industrial Exchange.

The office of the company is at 849 Equitable Building Baltimore, Md.

The treasury stock now being offered affords an investment opportunity that is well worth looking into.

The Big Union Mines, the property of this company, is on the same contract vein with the most noted of the great Leadville mines.

One of these the "Little Johnny" is the greatest gold mine in Colorado and perhaps in the world.

Its present output is about \$100,000 per month.

It paid last year \$1,600,000 in dividends and is now paying monthly dividends of \$100,000 to \$200,000.

MARYLAND TRUST CO.

Corner South and German Sts.

BALTIMORE.

CAPITAL, - \$1,000,000.

A LEGAL DEPOSITORY FOR COURT AND TRUST FUNDS.

Acts as Financial Agent for States, Cities, Towns, Railroads and other Corporations. Transacts a general trust business. Lends money on approved security. Allows interest on special deposits. Acts as Trustee under Mortgages, Assignments and Deeds of Trust; as Agent for the Transfer or Registration of Stocks and Bonds, and for the payment of coupons, interest and dividends.

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WOULDN'T YOU LIKE TO OWN AN INTEREST IN A GOLD MINE?

Suppose you write for particulars about

THE BIG UNION MINING CO

This company owns and is now opening up rich gold mines in the famous Leadville Gold Belt of Colorado. The officers and stockholders of the company are not speculators but are well-known conservative business men. Here are some of them:

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Alphabetical Index of Advertisers.

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